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Figure 1

drIndyl sequence (total 2602)

(ORF: 258 - 1976)

TTCACCGTTTCCGAATCGGACGAACCGGGCGTGATTGCTCTCCTGCTGCTTTTCGAGATCGGAGTCCCGATAAGGATA  
TAACTACAACCTAAAGAGGAATCCAAGCCTCCTCCTGCCGCTAGTTTCGAAAAGTAAATAGAGTACTTGTATCAAC  
TGGGAAGCGGAGATACATAGCTCCGATATTCTGTGAAAGCCAGACAAAACGGATACCAACGAACAATCGCCATATCT  
ACACGCCACCGCCACTGGACATCAAAATGGAAATTGAAATTGGCGAACAACCCAGCCTCCGGTGAAGTGCTCCAAC  
TTCTTCGCTAACCCTGGAAGGGATTGGTTGTGTTCTCTGGTGCCGCTGCTATGCTGCTGCTGTTATGCTGCTAAACGA  
AGGCGCCGAATTTCCGGTGCATGTACCTCCTTTTGGTAATGGCCATATTTGGGTTACGGAAGCCTTGCCCTCTCTATG  
TGACGTCATGATACCGATTGTGGCCTTCCCAATAATGGGTATAATGAGCTCGGATCAGACTTGCCGCTTGCTACTTC  
AAGGATACGCTGGTGATGTTTCATGGGCGGCATTATGGTGCCTGCTGCTGGAGTACTGTAATCTACACAAACGCTCT  
TGCCTTGAGGGTAATCCAGATCGTGGGCTGCAGTCCCCGAGATTACACTTTGGCCTCATCATGGTTACAATGTTTT  
TGAGCATGTGGATTTCGAACGCCGCTGTACTGCCATGATGTGTCGGATTATCCAAGCCGTGCTGGAGGAGCTGCAG  
GCTCAGGGTGTCTGCAAAATCAACCATGAGCCTCAATACCAATCGTTGGAGGCAACAAGAAAAACAACGAGGATGA  
GCCACCATACCCCACCAAGATCACTCTGTGCTACTATCTGGGCATTGCCCTACGCCCTCCTCGCTGGGTGGCTGTGGAA  
CCATCATCGGAAGTCCACCAATCTTACCTTCAAGGGCATCTACGAGGCTCGTTTCAAGAAGCTCCACCGAACAGATG  
GACTTCCCCACCTTCATGTTCTACTCGGTGCCATCCATGTTGGTCTACACCTTGCTGACATTGCTGTTCTCTCAATG  
GCACTTCATGGGTCTGTGGCGTCCCAAGAGCAAGGAGGCACAGGAAGTCCAGAGGGGACGAGAGGGCGCCGATGTGG  
CCAAAAAGGTTATCGATCAGCGCTACAAGGATCTGGGTCCCATGTCCATTACAGAGATCCAAGTGATGATTCTGTTTC  
ATTTTTATGGTTGTGATGTACTTACCCGCAAGCCCGGCATCTTTTTGGGATGGGCCGATTTGCTGAATTCCAAGGA  
CATTTCGTAACCTATGCCCACTATTTTGTCTGCTCATGTGCTTCATGCTGCTGCCCGCAATTATGCTTTCCTACGCT  
ACTGCACAGACGCGGTGGTCCAGTGCCCAAGGGTCCCACTCCATCGCTGATCACCTGGAAGTTCATCCAGACCAAG  
GTGCCATGGGGTCTGGTGTCTCTGCTTGGCGGTGGCTTCGCTTTGGCCGAAGGCAGCAAGCAGAGCGGCATGGCCAA  
GCTGATTGGCAATGCTCTGATTGGATTGAAGGTTCTGCCCAACTCTGTCTCTTACTGGTGGTCTATCCTGGTGGCTG  
TGTTCCTGACCGCCTCAGCTCCAATGTGGCGATTGCCAACATTATTATTTCCCGTTCTGGCCGAGATGTCCTGGCC  
ATTGAGATCCATCCTCTGTACTGATCCTGCCCGCTGGCTTGGCCTGCAGTATGGCCTTCCACCTGCCGGTTAGTAC  
TCCGCCCCAACGCTTTGGTTGCTGGCTATGCCAACATTAGGACGAAGGACATGGCCATTGCTGGAATCGGTCCGACCA  
TCATTACCATCATCACCTGTTTGTCTTCTGCCAAACCTGGGGCCTGGTCTGCTATCCGAACCTTAACCTCGTTCCCC  
GAATGGGCTCAGATTTATGCCGCGGCAGCACTGGGAAACAAGACGCACTAGATAGTTAGTAATTAGTGTAATAACT  
AACATAACCGTCACAGCGATAAAGTTGAGGAAAATTTAGGGAATTTTAAACGAAAAGTGCCCTTTGCTGACAGCGAAA  
AATGTGAAAAATATTTAACTATGTATACTTGCATTTTCAGAGTTGCGAAAAGTTTGATACAAAAGCATTACCTACTG  
TTTAGAAAAATGTGTTAAAAAAAACGTATCGCAATATACTGTTAATCAGGAATTGAACACCTGGTCTACGCATC  
AGCTAAATATTTAAATACAAATTAATGTTACTTAATTGTTGCATTTAGCATAAAAAATGGAAAAGATTGGAAAAGTT  
AGAACAGTTTGTTCATGGCAGCCCTGGCCTGCTAATATTTTAAATAACTAGACTGAGAGAAGTTACATATTCTATC  
ATGTTTTTCAACTTGTAATAATTTTAAATGAACAACTCACTCAATACTTCATTGCGAACCAAAATGAACACACAAA  
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SEQ ID NO:1

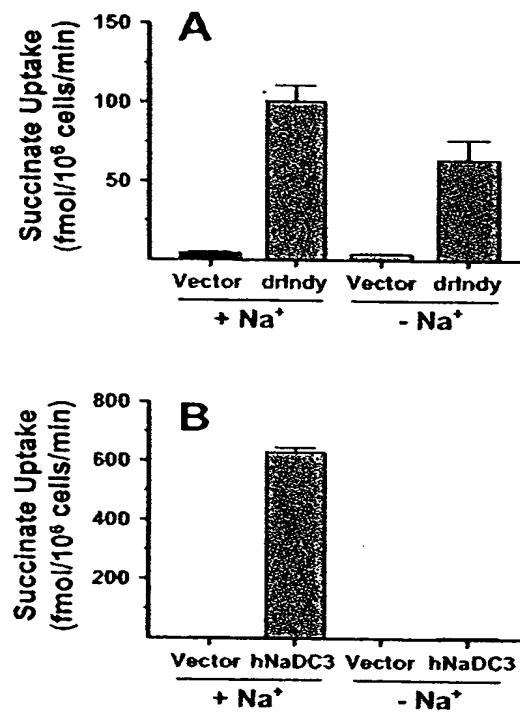
Peptide seq (total 572)

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SMIPIVAFPIMGIMSSDQTCRLYFKDTLVMFMGGIMVALAVEYCNLHKRLALRVIQIVGCSPPRLHFGLI  
MYTMFLSMWISNAACTAMMCPIIQAVLEELQAQGVCKINHEPQYQIVGGNKKNEDEPPYPTKITLCYYL  
GIAYASSLGGCGTIIGTATNLTFKGIYEAREFNSTEQMDFTFMFYSVPSMLVYTLTTFVELQWHFMGLW  
RPKSKEAQEVQREGADVAKKVIDQRYKDLGPMSEIHEIQVMILFIMVVMYFTRKPGIFLGWADLLNSK  
DIRNSMPTIFVVMCFMLPANYAFLRYCTRGGPVPPTGPTPSLITWKFIQTKVPWGLVFLGCGGFALAEG  
SKQSGMAKLIGNALIGLKVLPNSVLLLVILVAVFLTAFFSNVAIANIIPVLAEMSLAIEIHPLYLILP  
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SEQ ID NO:2

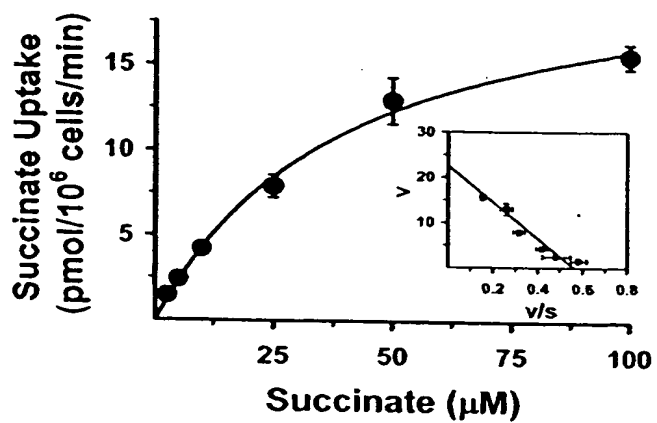
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Figure 2



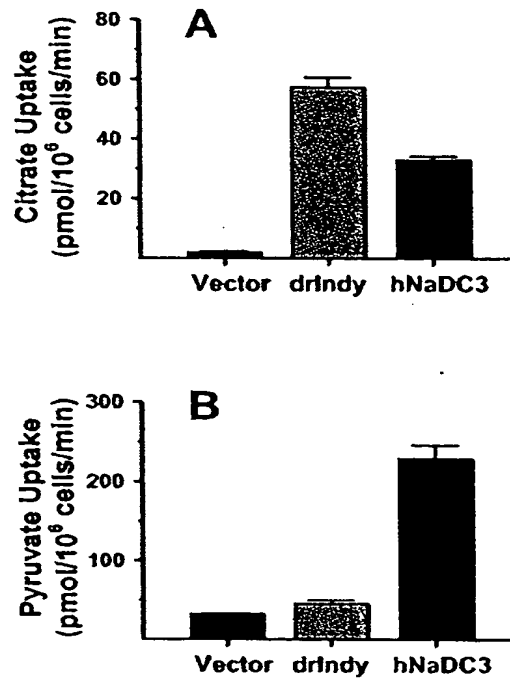
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Figure 3



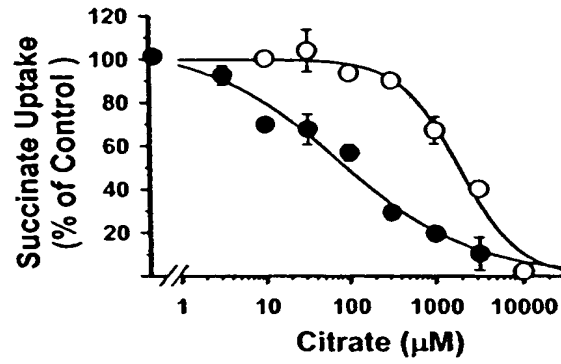
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Figure 4



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Figure 5



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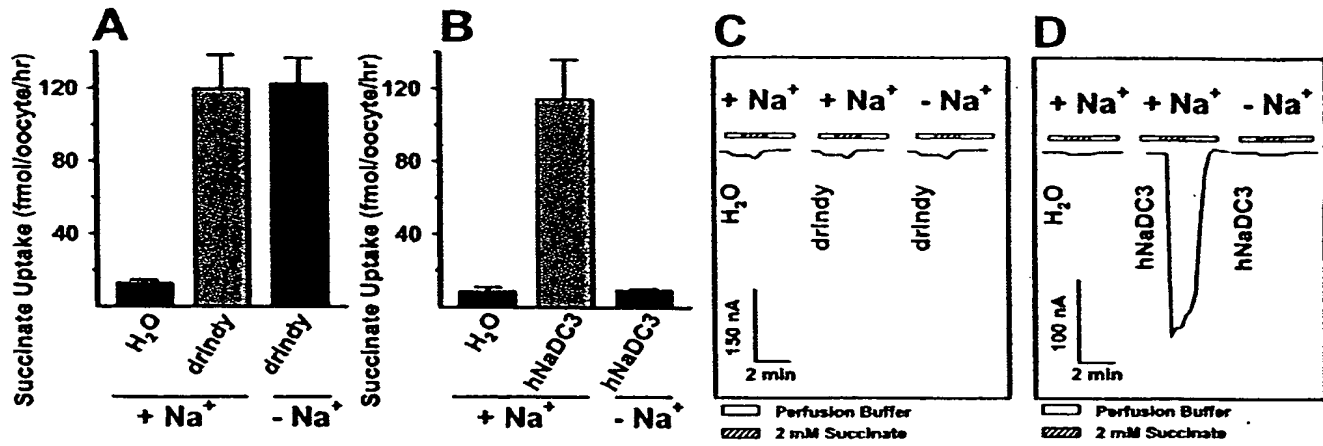


Figure 6

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Figure 7

Rat INDY seq.  
(3191 nt + 63 nt polyA)

CCAGTCTGTCTCCCTTTACGCGATGGCTTCGGCGAAGACTTATGTGACCAAGTTCAAGTCCTTCGTGATTTTGTCTTCGCCCC  
GATCCTGCTGCTTCCACTCATCATTTCTGGTACCTGACAAGTTTGCCAGGTGTGCCTATGTTATAATCCTCATGCCATCTACTGG  
TGCACAGATGTATGCCAGTGGCTATCACTTCCCTCGCTGTCTACTCTTCCACTTTTGAAGGTTCTGGACCTCAAGCAGG  
TATGTGTCCAAATACATGACGGACACCAACATGCTGTTCTGGGCAGTCTCATTGTGGCCACGGCTGTGGAACGTTGGGAACTTCA  
TAAAGAGGATTGCTCTGAGAATGCTACTCTTTGTGGGGACCAAGCCTTCAGGGCTGATGCTGGGCTTCATGTTCTGTCACAGCCTTC  
CTGTCCATGTGGATCAGCAATACTGCCACCACGGCCATGATGATACCAATTGTGGAGGCCATGCTGGAGCAAAATGGTAGCCACAA  
ATGTAGCGGTGGATGCCAGCCAGAGGACAATGGAACGTGTGGACAAGAACAGGCCAGGAATTGGCCAGGAAGCCAGGTGGTATT  
TGAACACCCAGTGTGCAAGAGCAGGAGGATGAAGAAAACAAAGAATATGTACAAGGCTATGAACCTATGTGTGTCTACGCAGCC  
AGCATCGGGGTACAGCCACCTTGACCGGGACGGGACCCAACGTGGTGTCTCTGGGCCAGATGCAGGAATTGTTTCCTGACAGTA  
AAGACGTCATGAACCTTGCATCTTGGTTTGCATTTGCCCTCCCAACATGCTTTTGTATGCTGGTGTATGGCCTGGCTGTGGCTCCT  
GTGTTTTTATCATGAGCAATTTAAAAAAAACCTTGCATCTGCTGTGGGAGGAAGAAGAAGGACACGGAGAAGATTCCCTCCAG  
GTGCTGTATGAGGAGTACAGGAAGCTGGGGCCCTTGAGCTACGCTGAATGCAACGTGCTCTTTTGTCTCGGCCCTGCTCATCTCC  
TGTGGTCTCTCCGAGACCCCGGCTTCATGCTGGCTGGCTGTCCATCGCTGGATCGAGGGAAATACCAAGCATGTACGGACGC  
CACAGTGGCCATCTTTGTGGCCATTTTGTCTTTTATCTGCTACCTTCAAAAAGCCCAAGTTCAATTTTACGCGCTCAGACTGAGGAA  
GAAAGGAAACCTCCCTTCTACCCCGCCCACTGCTGAATTGGAAAGTCAACCAAGAGAAAGTGGCCCTGGGGCATTGTGCTCTCC  
TGGGGGGAGGATTTGCTATGGCCAAAGGATGTGAGACTTCAGGGCTCTCTGAGTGGATGGCGAGACAGATGGAGCCCTTGAGCTC  
AGTGAGACCTGCTATTATTACCTTGATCTTGTCTGTATTGTTGCAATGACCACAGAGTGCACGAGTAACGTGGCCACTACTACC  
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CACTTGCCTTCATGTTGCCCTGTGGCCACCCCACTTAACGGCATGCTGTTTGGCTACGGACACCTCAAAGTTATTGACATGGTAAA  
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CATCTCCAACCACTGGGCAACCTGAGGTGCTAACATTGAGCCCTTCTGCTCACCCTTGGCTGACCTGTTCCCTACTTGGCTTA?  
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SEQ ID NO:3

(572 aa)

MASAKTYVTKFKSEVILFFAPIILLPLIILVDPDKFARCAIVILMAIYWCTDVI PVAITSLLPVLLFPLLKVLDSKQ  
VCVQYMTDTNMLFLGSLIVATAVERWELHKRIALRMLLFVGTKPSRLMLGFMFVTAFLSMWISNTATTAMPIPIVEA  
MLEQMVATNVAVDASQRTMELLDKNKASELPGSQVVFEDPSVQKQDEETKNMYKAMNLCVCYAASIGGTATLTGTG  
PNVVLLGQMQLFPDSKDVNFASFALPNMLMLVMALWLLCFYMRPNLKKTICCCRKKKDTEKIASKVLVE  
EYRKLGPLSYAECNVLFCEGLLIILWFSRDPGFMPGWLIAWIEGNTKHVTDATVAIFVAILLFIVPSQPKPFNFSR  
QTEEERKTPFYPPPLLNWKVTOEKVPWGI VLLGGGFAMAKGCETSGLSEWMARQMEPLSSVRPAIITLILSCIVAM  
TTECTSNVATTTFLPIFASMARSIGIHPYVMI PCTLSASLAEMLPVATPPNAIVFAYGHLKVICMVKTGLVMNII  
GIASVFLSVNTWGRAVFNLDKEPDWANLTHINT

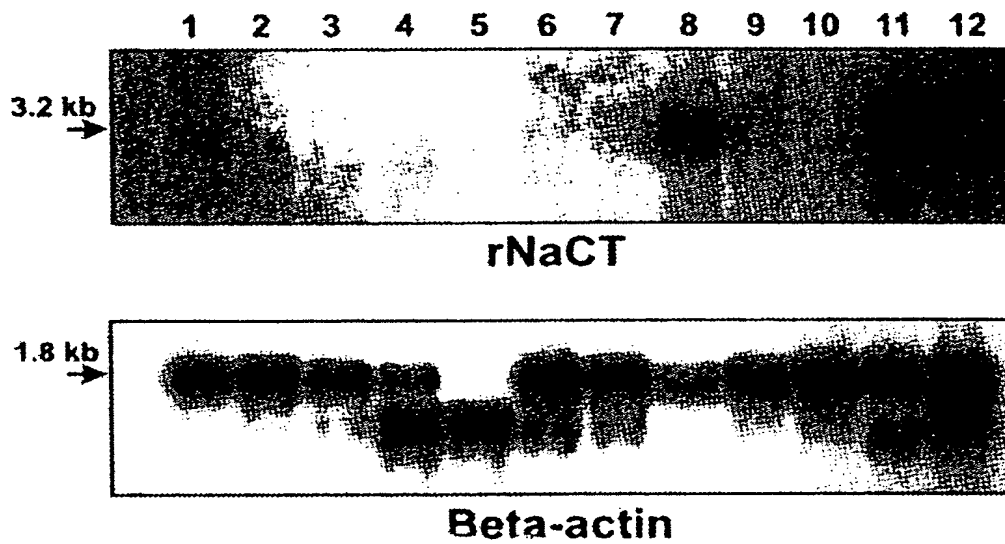
SEQ ID NO:4



Figure 8

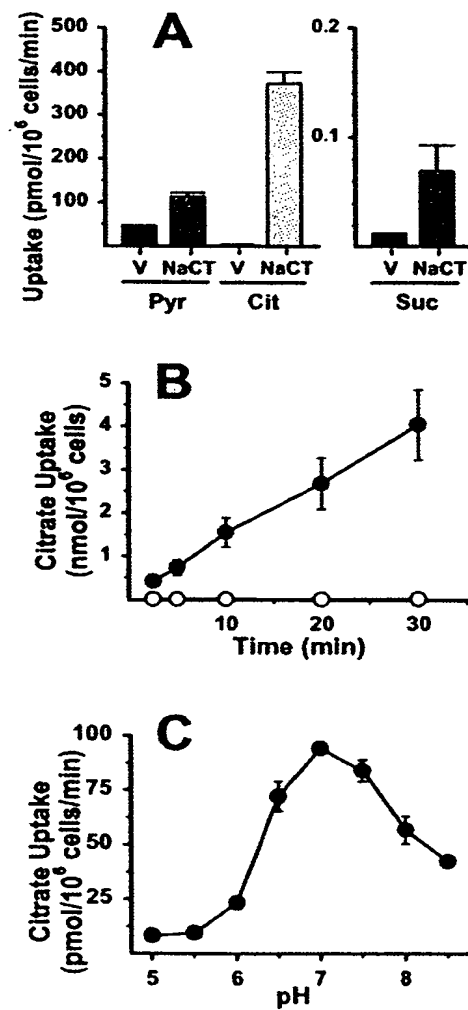
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Figure 9



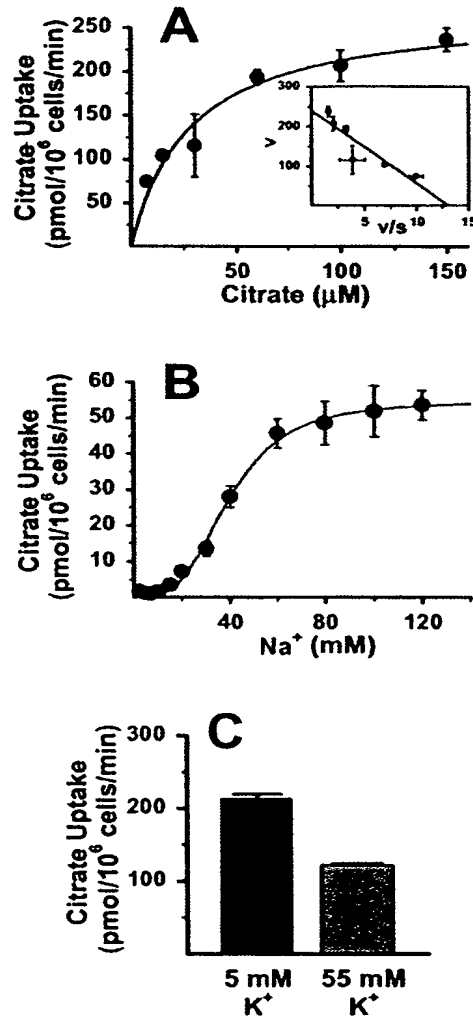
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Figure 10



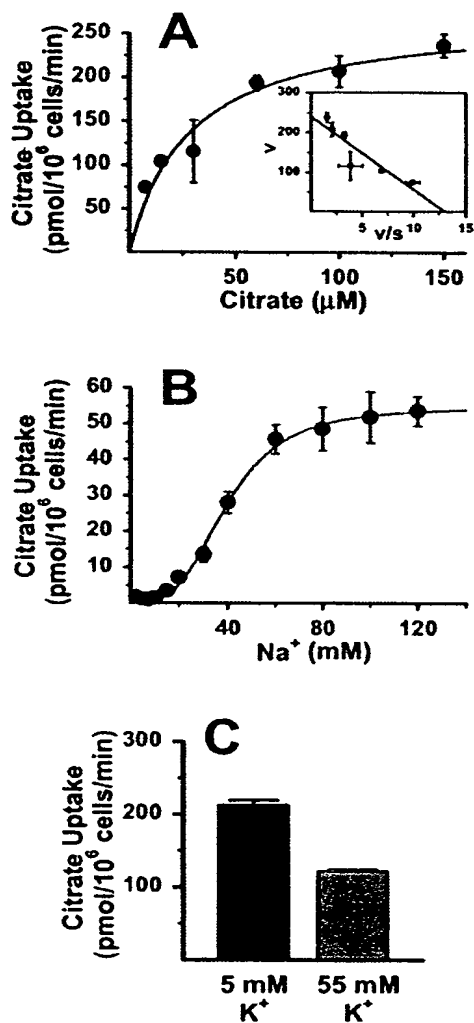
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Figure 11



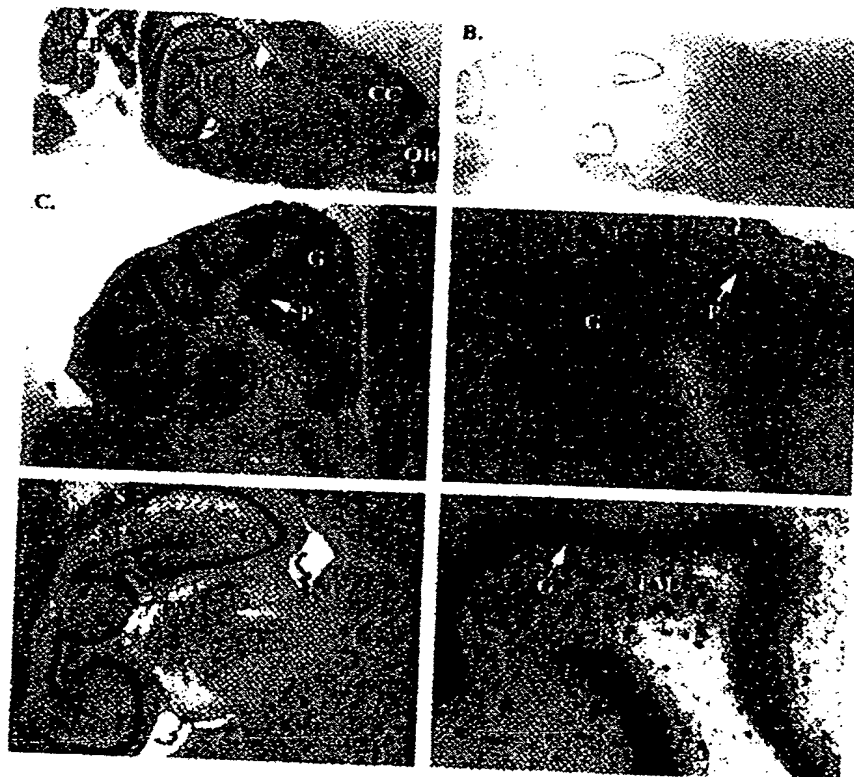
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Figure 12



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Figure 13



SEQ ID NO:6

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human 1 MASALSYVSKPKSSVILSPVTGLDULPLVLMEAKEVRCAVWLLALYNCTEVIPLAVTS  
 rat 1 MASAVSYVSKPKSSVILSPVTGLDULPLVLMEAKEVRCAVWLLALYNCTDVIPLAVTS

human 61 LMPVLLSPFLPGLDSRQVGVVYVDTIRMLSLGGLIVAVVERKDEKRIALPDLKVGAK  
 rat 61 LMPVLLSPFLPGLDSRQVGVVYVDTIRMLSLGGLIVAVVERKDEKRIALPDLKVGAK

human 121 PARMLGCGVYALPSNHSNTATTACWDEVENIEDEKATSNITDG---DELVDKGL  
 rat 121 PSRLMLGCGVYVLPSSNHSNTATTACWDEVENIEDEKATSNITDG---DELVDKGL

human 178 KCLPFGSGLVFEGLCCGEEDEKRRDCCVPTLCICVYASIGGSTATLTGGGNTVLLGCK  
 rat 181 KCLPFGSGLVFEGLCCGEEDEKRRDCCVPTLCICVYASIGGSTATLTGGGNTVLLGCK

human 238 NELFPDSKOLVNFASNFASAFGRMLVALLPAMWLPVVRPSPKSNWGGLESKE-NET  
 rat 241 NELFPDSKOLVNFASNFASAFGRMLVALLPAMWLPVVRPSPKSNWGGLESKE-NET

human 297 AALKVLEDEVRKLGPLSYAEITVLIICFPLVILWSSRDPGFMFGNLCVAVVEGERTVSC  
 rat 301 IALKVLEDEVRKLGPLSYAEITVLIICFPLVILWSSRDPGFMFGNLCVAVVEGERTVSC

human 357 ATVAIFVATLPLFVPSCKPKFNGRSCTEERKTEFVPPPLDKKVTCCKVFPNGIVLLGG  
 rat 361 ATVAIFVATLPLFVPSCKPKFNGRSCTEERKTEFVPPPLDKKVTCCKVFPNGIVLLGG

human 417 GPALAKGSDAGLSVWIKRKEPLHAPPSAITGLSLVAVPTGCTSNVATTTLPLPIS  
 rat 421 GPALAKGSDAGLSVWIKRKEPLHAPPSAITGLSLVAVPTGCTSNVATTTLPLPIS

human 477 ASKRSISGLPLVYINLPCTLSASAFMLPVAIAPPNAIVEVCHLKVADKKTGVINCHIG  
 rat 481 ASKRSISGLPLVYINLPCTLSASAFMLPVAIAPPNAIVEVCHLKVADKKTGVINCHIG

human 537 LPOVSLAINTGRAISQDHPDQNAVTHIEK  
 rat 541 LPOVSLAINTGRAISQDHPDQNAVTHIEK

Figure 15





Figure 17

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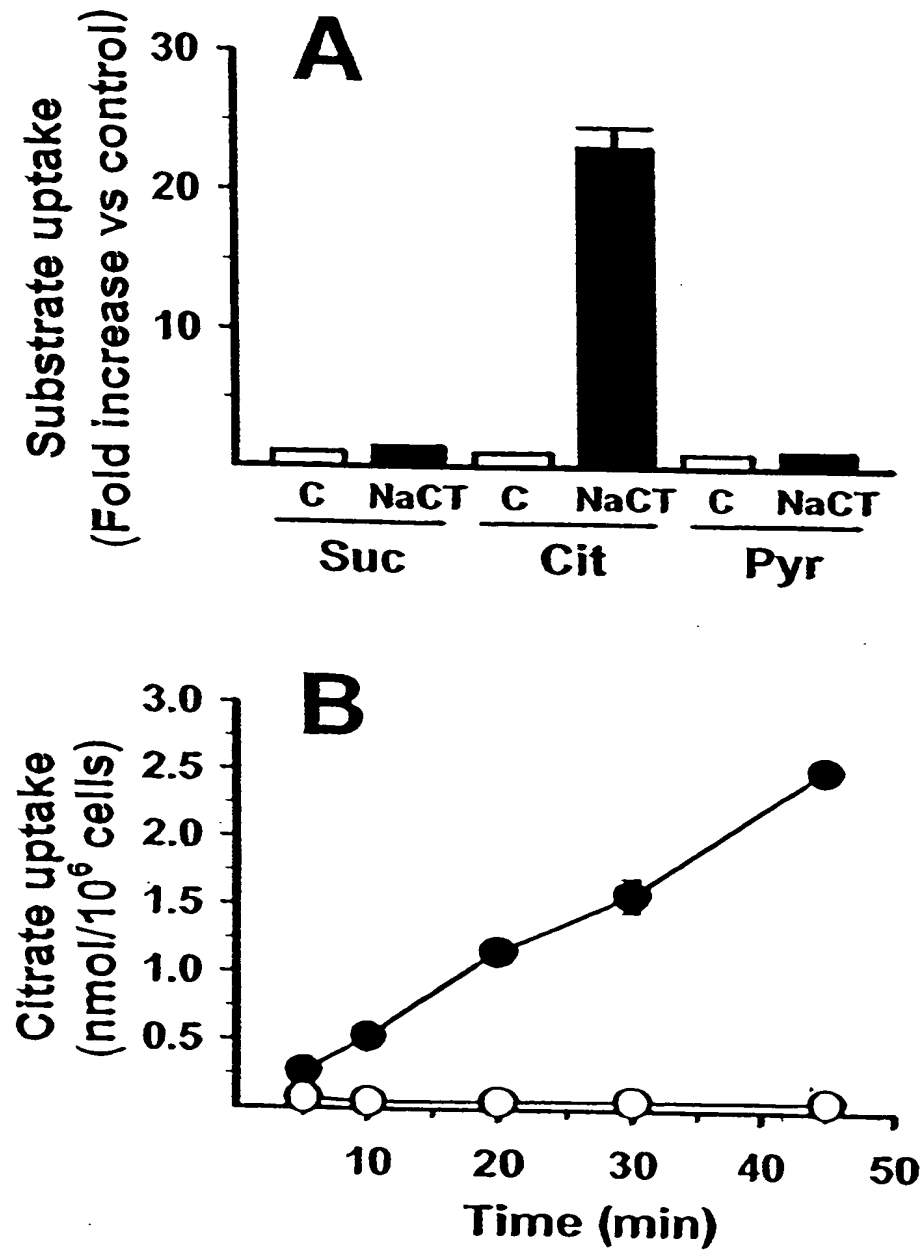
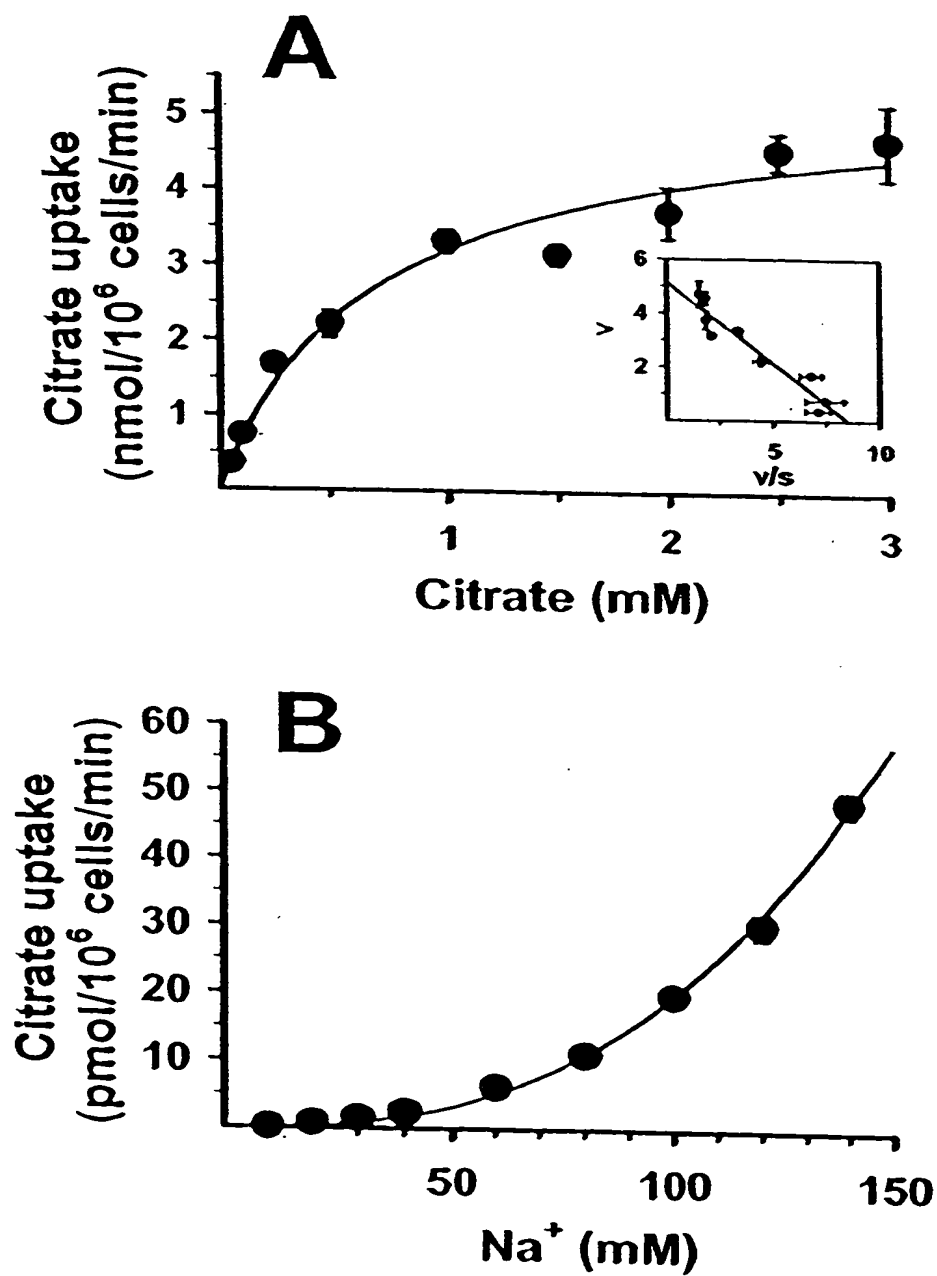


Figure 18

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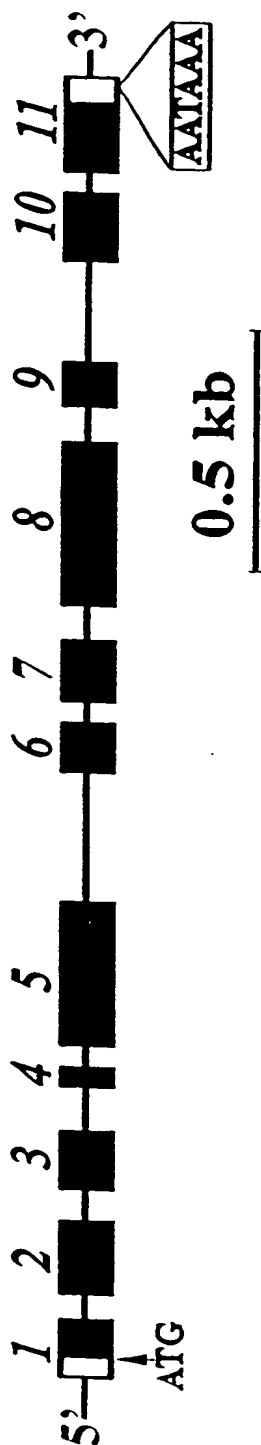
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### ceNaCT cDNA & Protein Sequences

[illegible]

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Figure 20



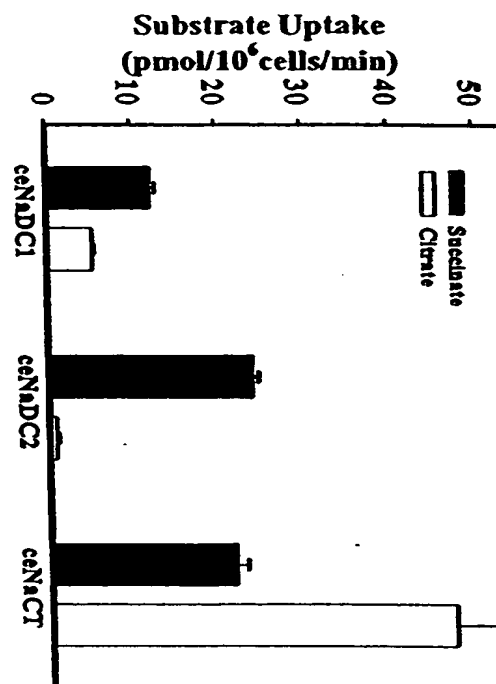
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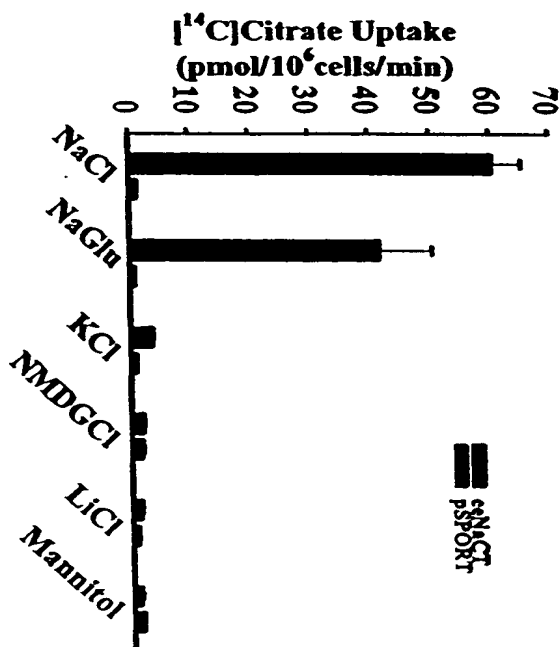
Figure 21

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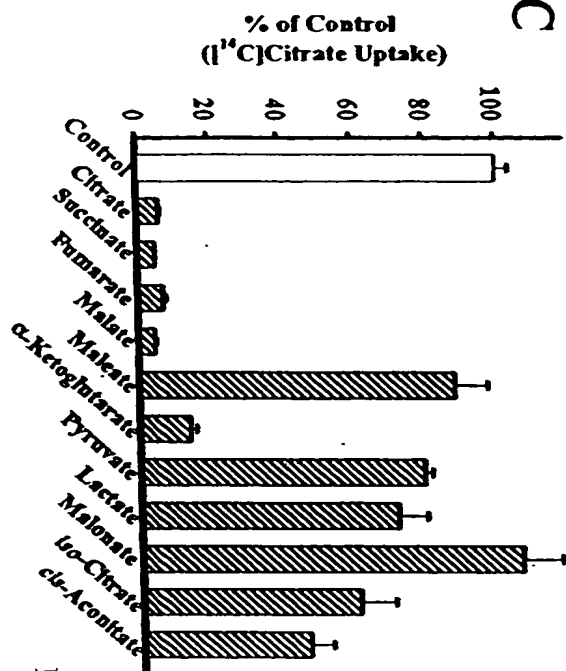
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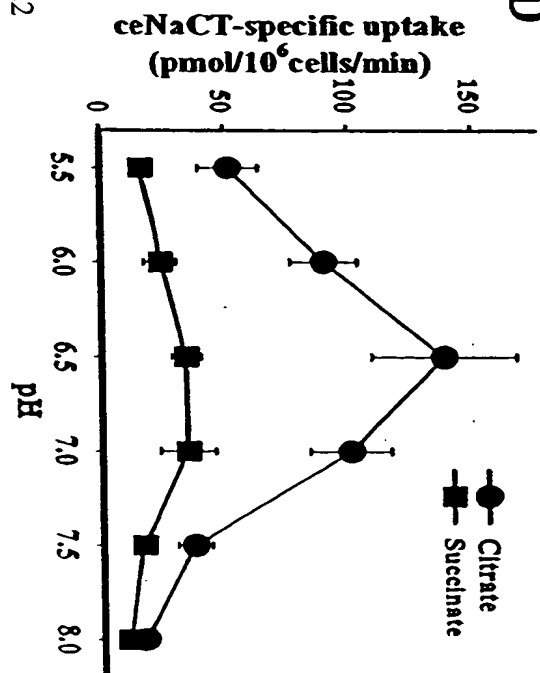
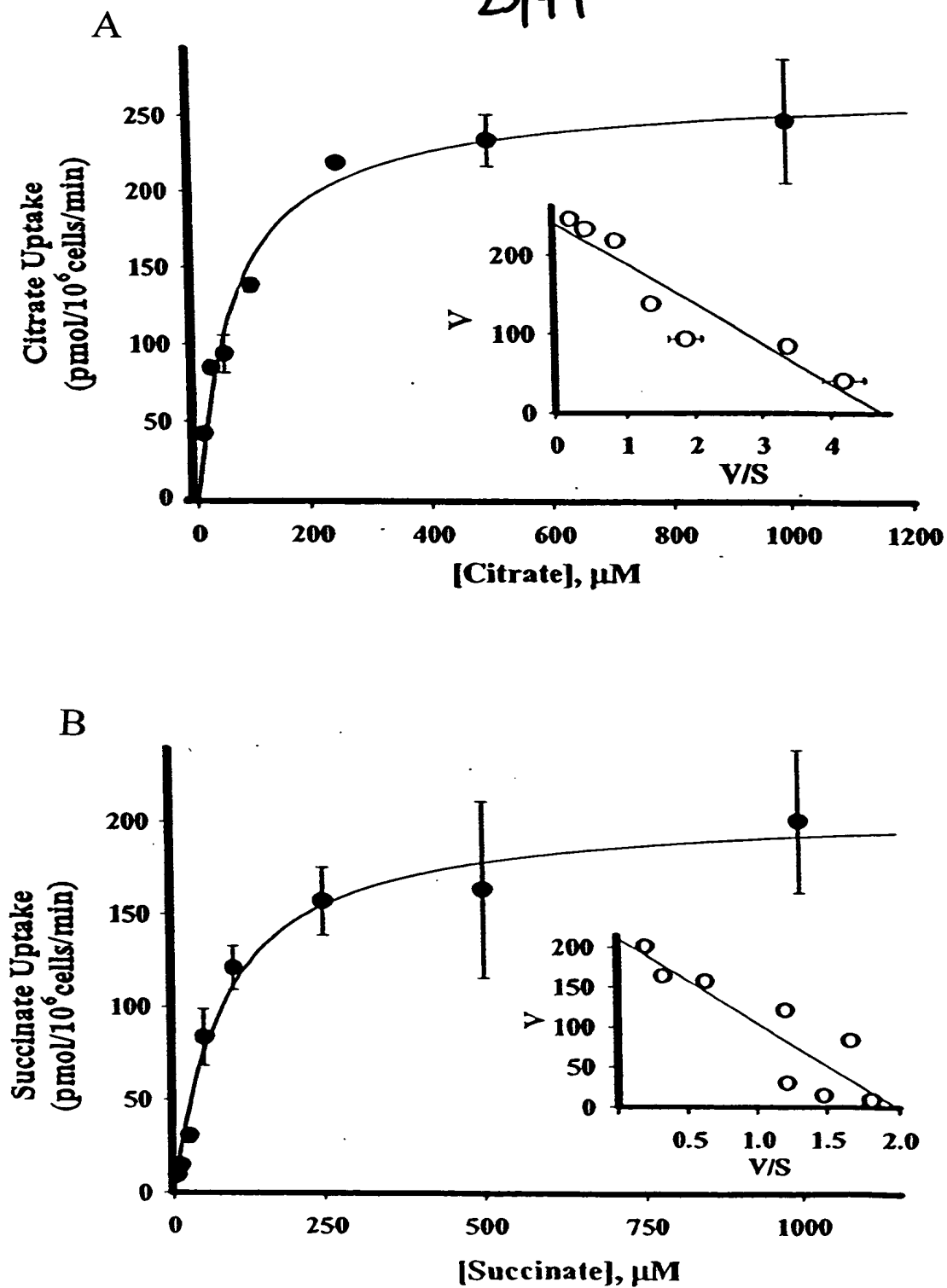


Figure 22

Figure 23





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Figure 24

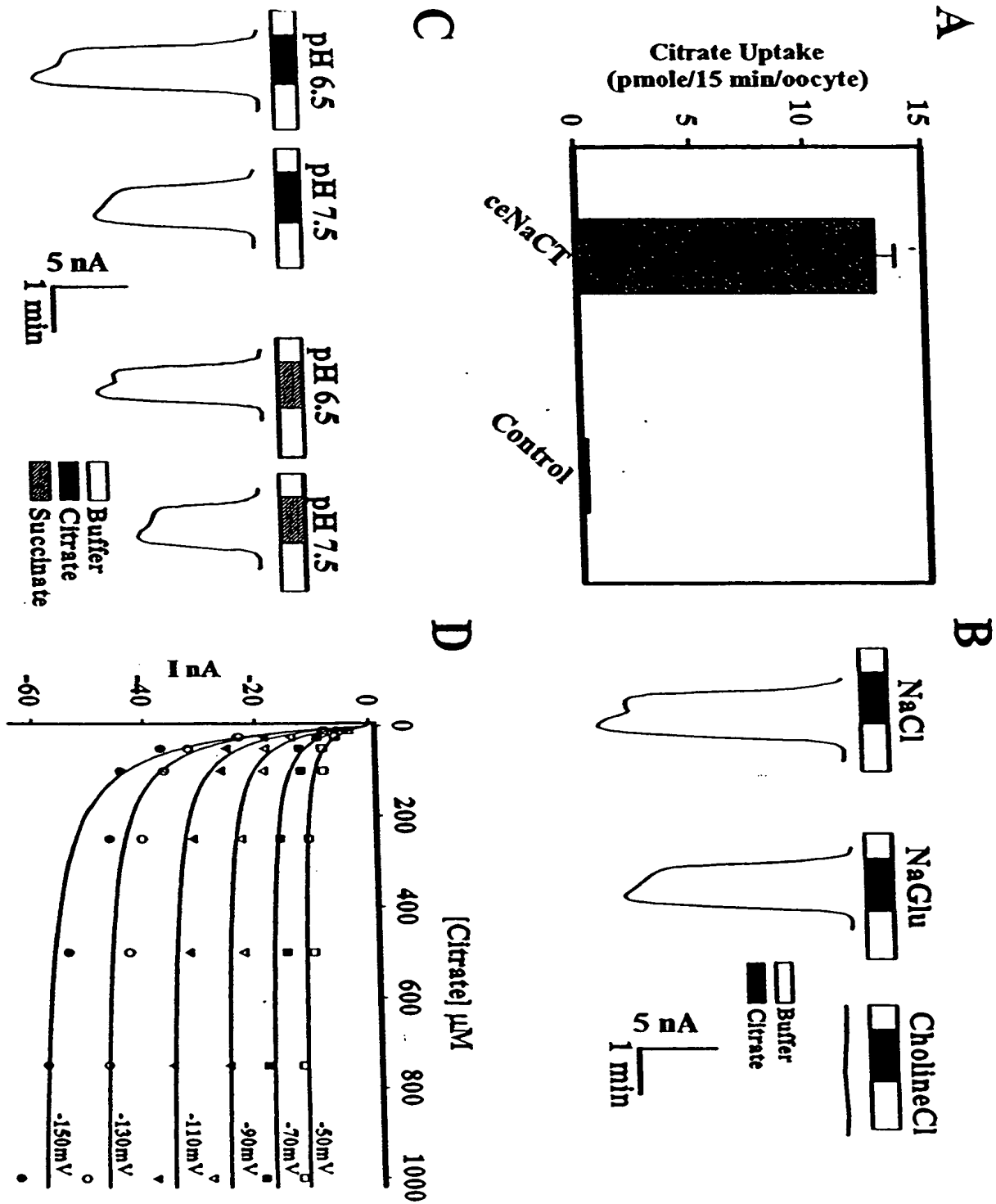
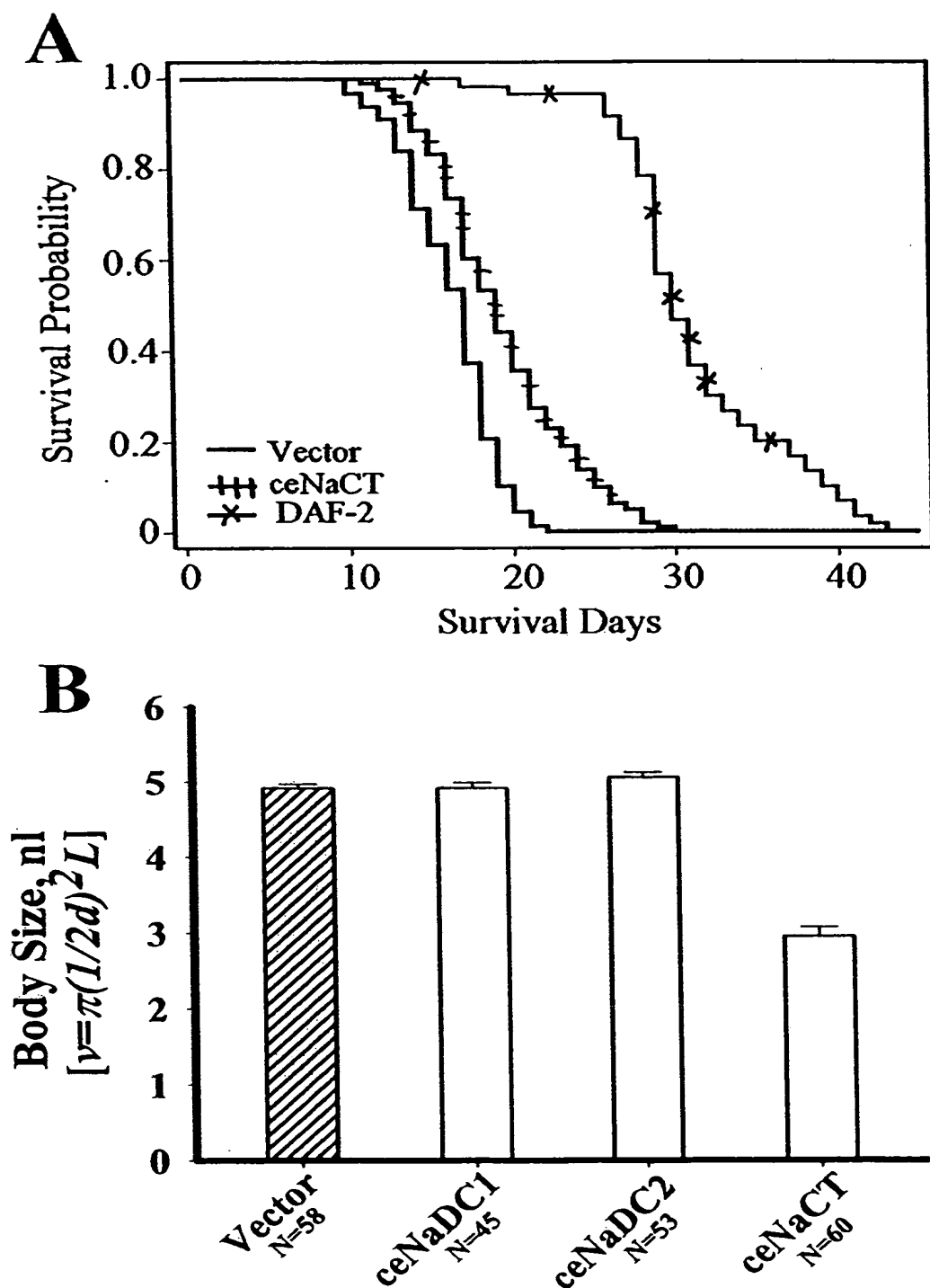


Figure 25

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Figure 26

RNAi; ceNaCT & pPD129; Nile Red (0.05 µg/ml) staining

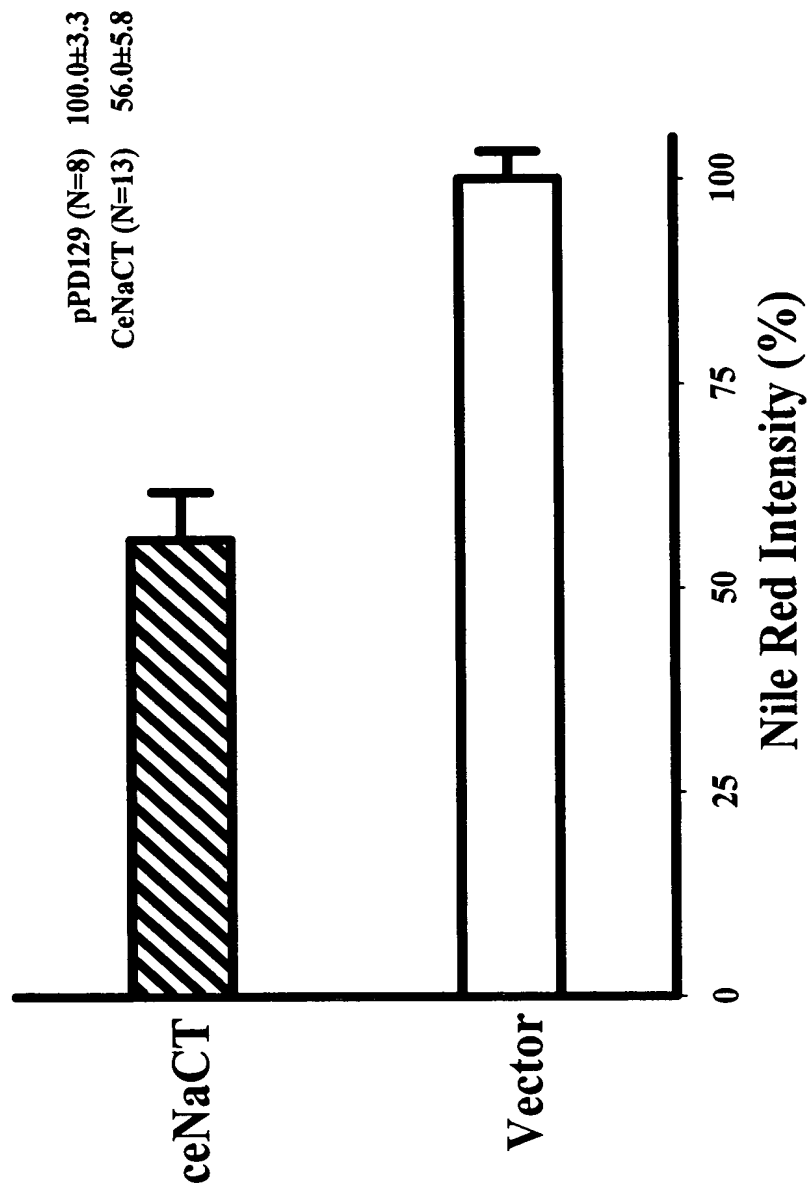


Figure 27

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SEQ ID NO:9

Mouse NaCT sequence

cDNA sequence (16 nt + 1719 nt)

GTCTCCCTTTCACGCG  
ATGGATTCCGCGAAGACTTGTGTGACCAAGTTCAAGTCCTTTGCGATTTTGCTCTTCACCCCGATCCT  
GATGCTTCCACTCGTCATTCTGATACCTGACAAGTTTGCCAGGTGTGCCTATGTTATAGTCATTATGG  
CTGTCTACTGGTGACAGATGTCATCCAGTGGCTGTGTACCTCCCTCCT GCCTGTCTTACTCTTCCCA  
CTTTTGAAGGTTCTGGACTCCAAGCAGGTATGTATCCAATACATGAAGGACACCAACATGCTGTTCTC  
GGCAGTCTCATTGTGGCTGTGGCTGTGGAAACGCTGGAAACTTCATAAGAGGGTTGCCCTGAGAATGC  
TGCTCTTTGTGGGGACCAAGCCCTCACGGCTGATGCTGGGCTTTATGTTTGTACCGGCTTCTCTGTCC  
ATGTGGATCAGCAATACTGCCGCCACAGCCATGATGATACCCATTGTGGAGGCCATGCTGCAGCAAT  
GATAGCCGCCAATACAGCTGTGGAGGCCAGCCTGGGGACACTGGAGCTGCTGGACAAGAACAAGACCA  
GCGAGTTGCCAGGAAGCCAGGTGGTATTTGAAGACCCCAATGTGCAGGAGCAGGAAGACGAAGAAACA  
AAGAATATGTACAAGGCTATGCACCTATGTGTTTGTCTATTTCAGCCAGCATTGGGGGTACAGCCACCTT  
GACCGGACGGGACCCCAACGTGGTGTCTCTGGGCCAGATGCAGGAATTGTTTCTTGACAGTAAAGATG  
TCTTGAACCTATGCATCTTGGTTTGGATTGGCTTCCCCAACATGGTGATGATGCTGGTGTGGCTTGG  
CTGTGGCTCCAGTGCTTGTACATGAGACACAATTTAAAAAAAACCTTGCATCTGCTGTGGGAGAAGAA  
GAGGGACACCGAGAAGATTGCCCTACAAAGTGCTGAACGAGGAGTACCAGAAGCTGGGGTCTTGGAGCT  
ACCCTGAATGCAACGTGCTCTTTTGTCTTACCCTACTTGTCTCTGTGGTTCTCCCGAGACCCCGGC  
TTCATGCCCTGGCTGGCTGTCTTCCCTGGGTGAGGGAAACACCGTTTCATATCACAGATGCCACAGT  
GGCCATCTTTGTGGCCATTTTGTCTTTTCATCATACCTTCACAAAAGCCCCAAGTTCAACTTCAGCAGCC  
AGACTGAGGAAGAAAGGAAAACCTCCGTTCTACCCCCCAGCACTGCTGGATTGG AAAGTCCGCCAAGAG  
AAAGTGCCCTGGGACATCGTGTCTCTCTGGGGGGAGGGTTTGTCTATGGCAAAAGGATGTGAGACGTC  
AGGGCTCTCGAAGTGGATGGCAGCACAGATGGAACCTTGAGATTAGTGAAACCTGCTGTCTTACCT  
TGATCTTGTCTCTGTCTTGTGTGCAATGACCACAGAGTGCACAAGTAACGTGGCCACTACCACCTGTTC  
CTGCCTATCTTTGCCTCCATGGCTCGTTCCATTGGTA TCCATCCTCTGTATGTCATGATTCCCTGTAC  
CATGAGTGCTTCACTTGCCTTCATGTTGCCTGTGGCCACCCACCGAATGCCATCGTGTTCCTTACG  
GACACCTCAGAGTTGTTGACATGATGAAAAACAGGATTGATAATGAACCTCGTTGGAATCCTATCTGTG  
TTTCGTGTCAGTCAACACCTGGGGTCCGGCTATGTTTAACTTGGATAACTTCCCCGACTGGGCAAATTC  
AACAAAGTGTTAACACTTAG

Protein sequence (572 nt)

SEQ ID NO:10

MDSAKTCVTKFKSPAILLFTPIILMLPLVILIPDKFARCAVYVIMAVYHCTDVIPIVAVTSLLPVLLFPLLKVLDSKQV  
CIQYMKDNTMLFLGSLIVAVAVERWKLHKRVALRMLLFVGTKPSRLMLGFMFVTAPLSMWISNTAATAMMIPIVRA  
QOMIAANTAVEASLGTLLELDKNKTSSELPGSQVVFEDPNVQEQEEDETIONMYKAMHLCVCYSASIGGTATGTPNV  
VLLGQMQLFPDSKDVLYASWFGFAPPNMVMMLVLAWLWLQCLYMRHNLKKTICCGEKKRDTEKIAYKVLNBEYQK  
LGSLSYPECNVLFCTLLVILWFSRDPGFMPGWLSPAWVEGNTVHITDATVAIFVAILLFIIPSQPKFNPSSQTEEB  
RKTPFPYPALLDWKVAQEKVPWDIVLLGGGFAMAKGCETSGLSKWMQAQMEPLRLVKPAVITLILSCLVAMTTECTS  
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SVNTWGRAMFNLDNFPDWNSTSVNT

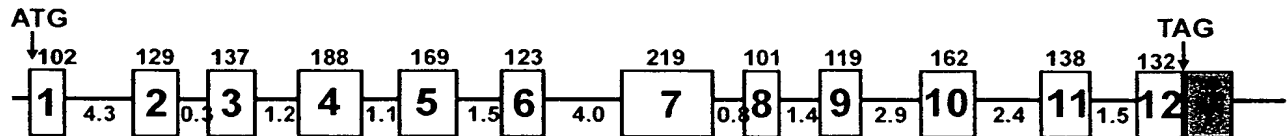
Figure 28

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mouse	1	MDSAKTQVTKFKSFAILLFTPIILMLPLVILIPDKFARCAYVIVIMAVYWCTDVIPVAVTS
rat	1	MASAKTYVTKFKSFVILFFAPILLPLLIILVPDKFARCAYVILMAIYWCTDVIPVAITS
human	1	MASATSYVSKFKSFVILEVTPLLLLPLVILMPAKEVRCAYVILMAIYWCTEVIPLAVTS
mouse	61	LLPVLLFPLLKVLDISKQVCIOYMKDNTNMLFLGSLIVAVAVERWKLHKRVALRMLLFVGTK
rat	61	LLPVLLFPLLKVLDISKQVCQYMDNTNMLFLGSLIVATAVERWELHKRIALRMLLFVGTK
human	61	LMPVLLFPLFQILDSRQVCQYMKDNTNMLFLGCLIVAVAVERWNLHKRIALRTLLWVGAK
mouse	121	PSRLMLGFMFVTAFLSMWISNTAATAMMIPIVEAMLQOMIAANTAVEASLGTTLELLDKNK
rat	121	PSRLMLGFMFVTAFLSMWISNTATTAMMIPIVEAMLEQMVAITNAVDAISORTIMELLDKNK
human	121	PÄRLMLGFMGVTAALLSMWISNTATTAMMVPIVEAILQOMEATSAATEAG---LELVDKGK
mouse	181	TSELPGSQVVFEDPNVQEQEDEETKNMYKAMHLVCYSASIGGTATLTGTGPNVVLGQM
rat	181	ASELPGSQVVFEDPSVQKQEDEETKNMYKAMNLCVYAASIGGTATLTGTGPNVVLGQM
human	178	AKELPGSQVIFEGPTLGOQEDQERKRLCKAMTLCICYAASIGGTATLTGTGPNVVLGQM
mouse	241	QELFPDSKDVLYNASWFGFAFPNMVVMLVLAWLWLQCLYMRHNLKKTICCCGKRRDTEK
rat	241	QELFPDSKDVLMNFASWFAPALPNMLLMVLMAWLWLCEYMRPNLKKTCICCGKRRDTEK
human	238	NELFPDSKDLVNFASWFAPAFPNMLVMLLFAWLWLQCFVYMRFNFKKSWCCGLESKK-NEK
mouse	301	IAYKVLNEEYQKLGSLSYPECNVLECFETLLVILWFSRDPGFMPGWLSIAWVEGNTVHITD
rat	301	IASKVLNEEYRKLGPPLSYAECNVLECFGLLIILWFSRDPGFMPGWLSIAWIEGNTKHVTD
human	297	AALKVLQEEYRKLGPPLSFAEINVLICEFLLVILWFSRDPGFMPGWLTVAWVEGETKYVSD
mouse	361	ATVAIFVAILLFIIPSQKPKFNFSQTEERKTPFYPPALLDWKVAQEKVPWDIVLLLG
rat	361	ATVAIFVAILLFIIVPSQKPKFNFSQTEERKTPFYPPPLLNWKVTQEKVPWGIVLLLG
human	357	ATVAIFVATLLFIIVPSQKPKFNFSQTEERKTPFYPPPLLDWKVTQEKVPWGIVLLLG
mouse	421	GFAMAKGCETSGLSKWMMAQMEPLRIIVKPAVITLILSCLVAMTTECTSNVATTTFLPIF
rat	421	GFAMAKGCETSGLSEWMARQMEPLSSVRPAIITLILSCLVAMTTECTSNVATTTFLPIF
human	417	GFALAKGSEASGLSVWMGKQMEPLHAVPPAAITLILSILVAVTECTSNVATTTFLPIF
mouse	481	ASMARSIGIHPLYVMIPTCTMSASLAFMLPVATPPNAIVEFAYGHLRVVDMKGTGLIMNEVG
rat	481	ASMARSIGIHPLYVMIPTCTLSASLAFMLPVATPPNAIVEFAYGHLKVIDMVKTGLVMNILG
human	477	ASMSRSIGINPLYIMLPCTLSASLAFMLPVATPPNAIVETYGHLKVADMVKTGVIMNIIG
mouse	541	ILSVFLSVNTWGRAMFNLDNFPDWANSTSVNT
rat	541	IASVFLSVNTWGRAVFNLDKFPDWANLTHINT
human	537	VFCVFLAVNTWGRAIFDLDFPDWANVTHIET

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Figure 29

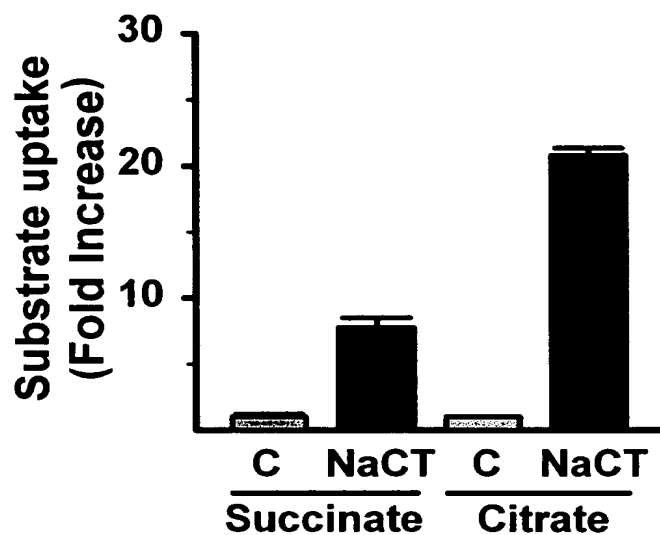
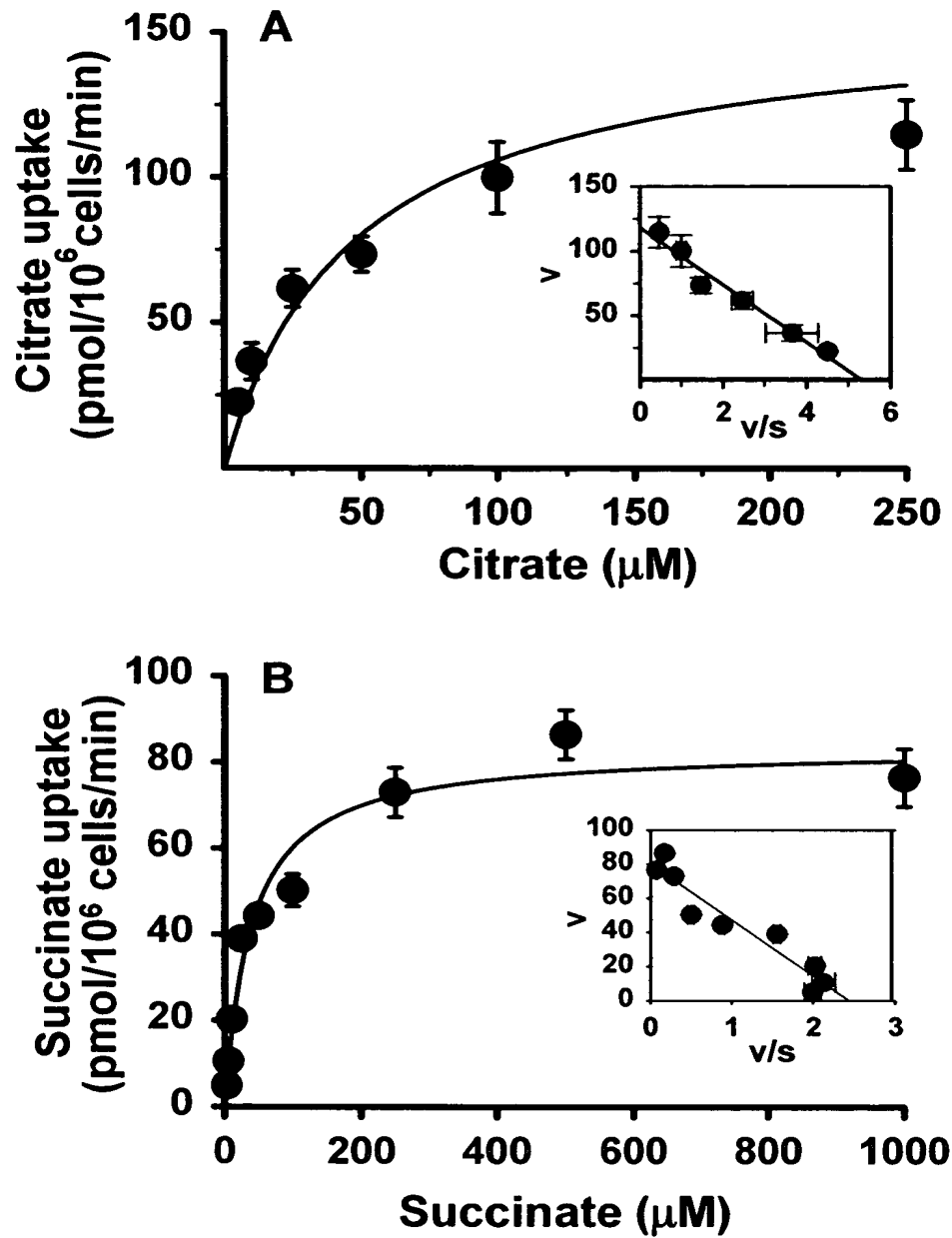


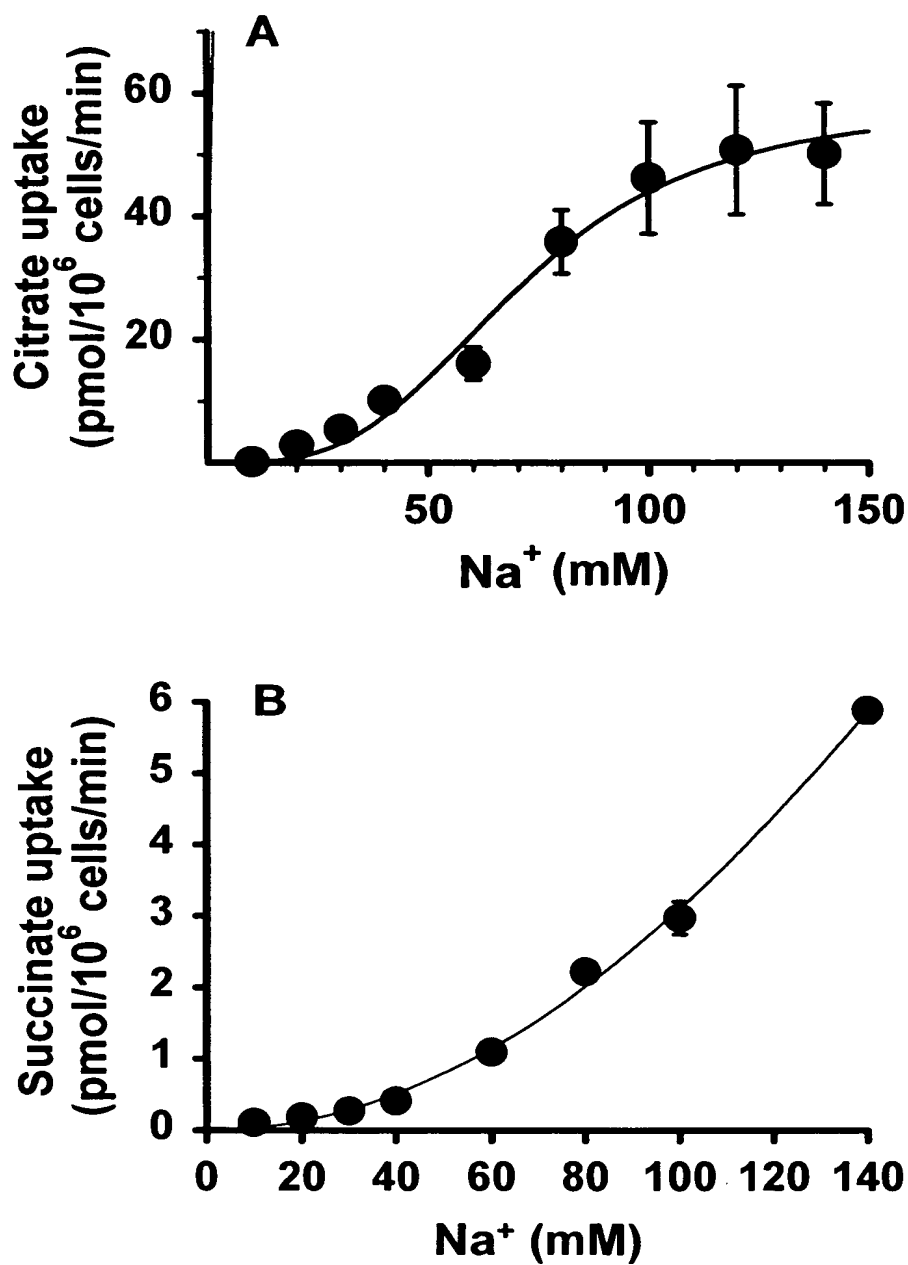
Figure 30

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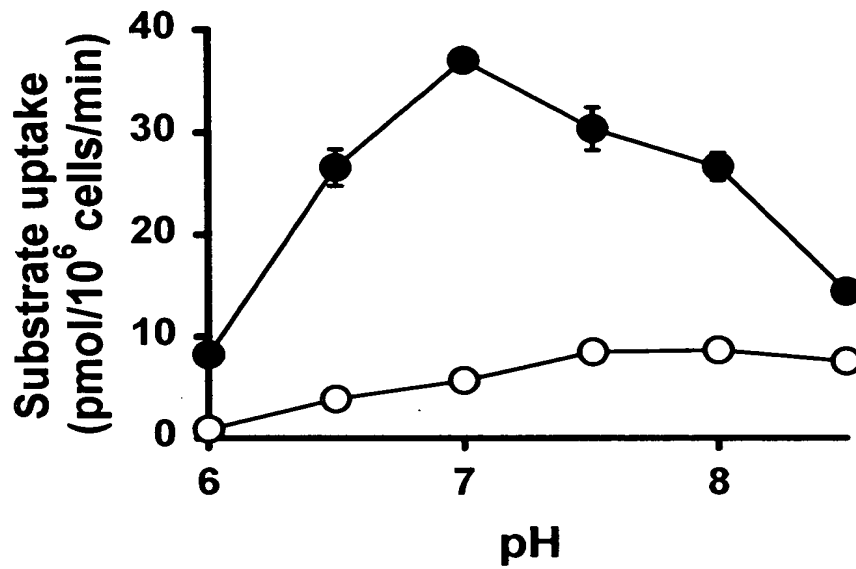
Figure 31





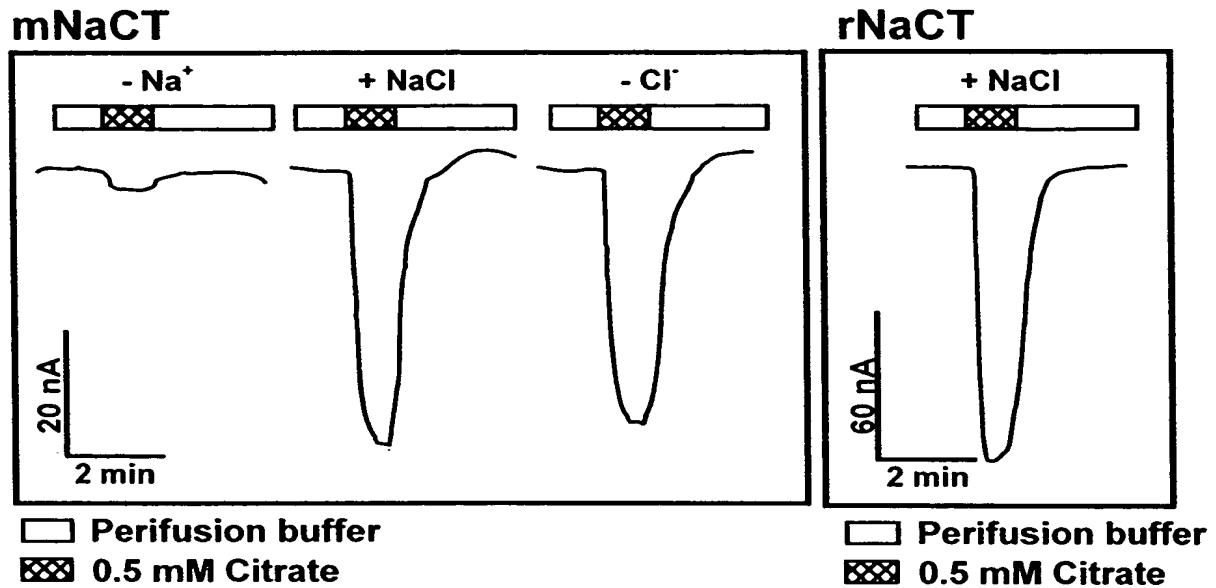
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Figure 32



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Figure 33



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Figure 34

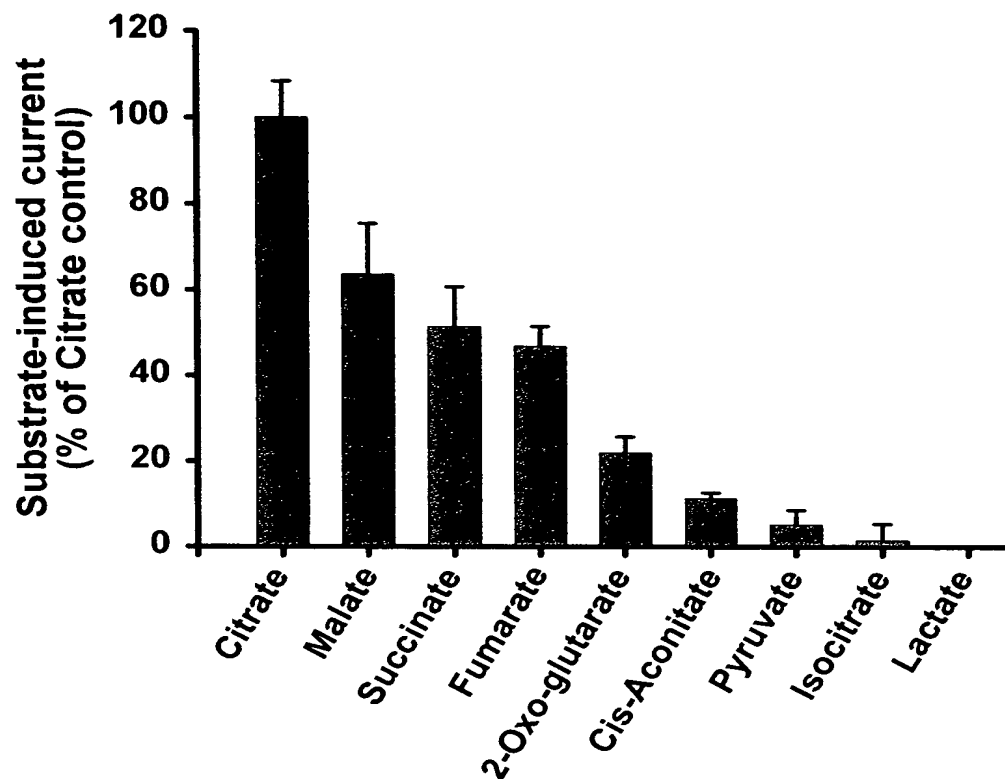
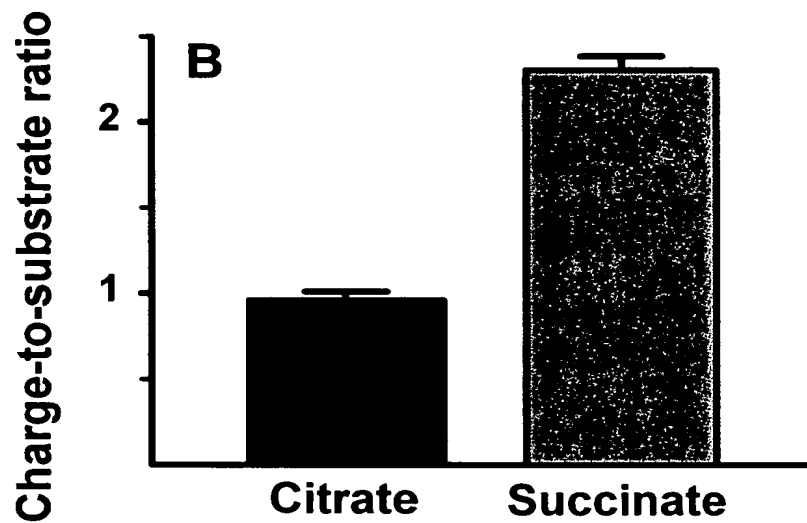
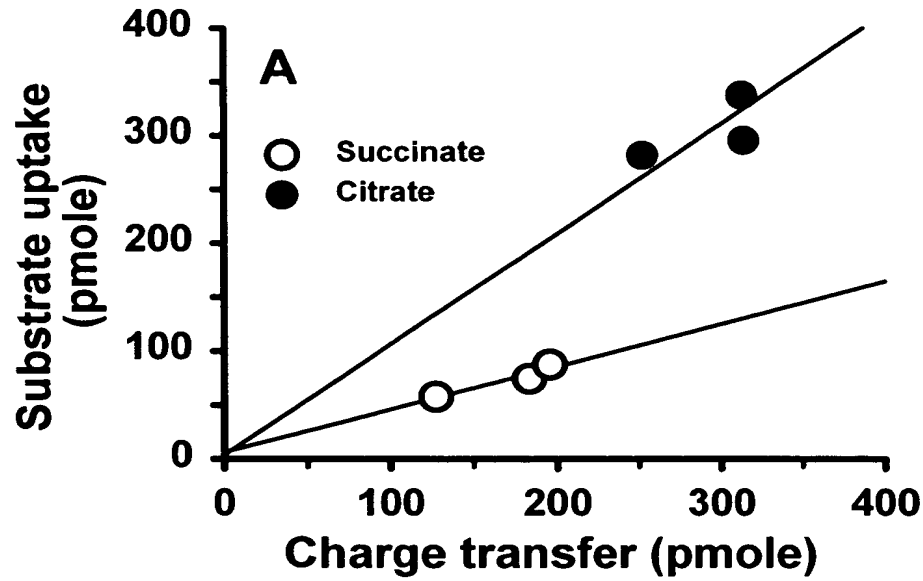


Figure 35

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Figure 36

**Zebra Fish NaCT full length cDNA (1#) (1-2536 + 15 bp)**

**ORF: from 76 – 1824 (length = 1749) (Seq ID No: 11)**

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AGAGATCAGCGCACAGAAGTTTTGCGCAGTTTCTCACCGTTTGGACATTTTCATTGTAAAGTTATCCAAAGCCGAAA
TGCTGCTTCACGTGCACTCAAAC TAGTATGGAAGATGAAAAATACATTGATTCTTTTTTGCCTCCATTTCTTCT
GCTTCCTTTGCCACTTGTCATTGGATCAAAGGAGGCTGGATGTGCATATGTTGTGGTACTGATGGCAGTTTACTGG
TGTACAGAGGTGCTGCCGCTGGCTGTCACTGCTCTCCTGCCCGCTGTGCTCTTTCCCTCTTCAGAATCATGGAGT
CCCAAGACGTATGTATGCAGTACCTTAAGGACACTAACATGCTGTTTCTGGGTGGCCTGATGGTGGCCGTGGCTGT
CGAACACTGGAATCTGCACAAGCGGATCGCCCTGCGGGTGCTGCTCCTTGTGGGGGTTTCGACCAGCTCTGTTAATG
TTGGGCTTCATGGGTGTAACAGCTTTCCTCTCCATGTGGATCAGTAACACGGCCACAACAGCCATGATGGTGGCCA
TCGTTTCAGGCAGTTCTCGAGCAGCTCAACAACACAGCACAAACAAGAACAAGCTCCATACCTGAGACCGAGGAAAA
GAGCACTGAGAAACAGCCTGAGAGCCCGGTGAGGAAAAAGTGGTACTGAATGGCGACAACCTTCTCAATGGAGTCA
GACCTTGAAGAACATTCAGGAGAAGCAGAGGAAAGGCTGAAGATGTCTAAAGGCCTGACCTGTGCGTGTGTTATG
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AGCCATTAACAGCTGGGGCAGAGCCATCTTCAGTTTAGACAGCTTCCCAGCTGGGCAAACACTACTGATGCTGCTG
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**Amino Acid Sequence (581 aa) (Seq ID No: 12)**

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QDVCMQYLKDTNMLFLGGLMVAVAVEHWNLHKRIALRVLLLVGVRPALLMLGFMGVTAFLSMWISNTATTAMVPI
VQAVLEQLNNTAQEQSSI PETEEKSTEQPESPGEEKVVLNGDNFSMESDPEEHSREAEERLKM SKGLTLCVCYA
ASIGGTATLTGTGPNLVLMGQMSQLFPDNPDI INFASWFGFAFPNMI IMLTLAWLWLQIVFLGINFKKTWGCYTK
TEKEIAAYNVIKEEHRSLGPMFTGELSVLALFILLVVLWFTDRDPGFVDGWATRFNADKEFVTDATVAVFVAALLF
VFPSKPPRLCFWRTEFDTVPQQESGPTPALLTWKVTQKKMPWSIILLGGGFALAKGSEISGLSKWLGDQMSPLQ
SIPWAI AIVICLMIATFTECTSNVATATLFLPILASMSQSIGVNPLYVMVPCTLSASFAMLPVATPPNAIVFSY
GYLKVSDMAKTGIVMNIIGILSITLAINSWGRAIFSLDTFPSWANTDV
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Figure 37

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```
fish 1 MASRALKLWFMKNTLILECTPFLLLPLPLVIGSKEAGCAYVVVLMNAVWCTEVLPLAVI
mouse 1 -MDSAKTCVTKFKSFALLSTPILMLPLVILIPDKFARCAYVIVIMAVWCTDVIPIVAVT
rat 1 -MASAKTYVTKFKSFVILFFAPILLPLILVPPDKFARCAYVITLMAIYWCTDVIPIVAIT
human 1 -MASALSYVSFKFSFVILEVTPFLLLPLVILMPAKEVRCAYVITLMAIYWCTEVIPIAVT

fish 61 ALLPAVLFPFLFRIMESQDVCMOYLKDTNMLFLGGLMVAVAVEHWNLHKRIALRVLLVGV
mouse 60 SLLPVLLFPFLKVLDSKQVCIQYMKDTNMLFLGSLIVAVAVERNKHLKRVALLRMLLFVGT
rat 60 SLLPVLLFPFLKVLDSKQVCVQYMTDTNMLFLGSLIVATAVERNELHKRIALRMLLFVGT
human 60 SLMPVLLFPFLFQILDSRQVCVQYMKDTNMLFLGGLIVAVAVERNLHKRIALRTLLWVGA

fish 121 RPALLMLGFMGVTAFLSMWISNTATTAMMVPIVEAVLECLNNIAQQEQSSIPETEEKSTE
mouse 120 KPSRLMLGFMFVTAFLSMWISNTAATAMMIPIVEAMLOQMTAANTAVEASLGTLELLDKN
rat 120 KPSRLMLGFMFVTAFLSMWISNTATTAMMIPIVEAMLEQVATNVAVDASQRTMELLDKN
human 120 KPARLMLGFMGVTAFLSMWISNTATTAMMVPIVEATLOQMEATSAITEAG---LELVDRG

fish 181 KQEPSPGEEKVVLNGDNFSMESDBEEHSREABERLKSKGLTLCVCYAASIGGTATLTGT
mouse 180 KISELPGSQVVF-----DPNVQEQEDEETKNMYKAMNLCVCSASIGGTATLTGT
rat 180 KASELPGSQVVF-----DPSVQKQEDEETKNMYKAMNLCVCSASIGGTATLTGT
human 177 KAKELPGSQVVF-----GETLGOQEDQERKRLKAMTLCICYAASIGGTATLTGT

fish 241 GPNVLVLMGQMSQLFPDNPDIINFASWFGFAFPNMIMLTLAWLWLCIVELGINFKKTWGC
mouse 231 GPNVVLLGQMQLFPDSKDVLNYSWFGFAFPNMVMMVLVAHLWLCCLYMRHNLKKTCTC
rat 231 GPNVVLLGQMQLFPDSKDVMNFASWFAFALPNMLLMVLMAHLWLLCFYMRPNLKKTCTC
human 228 GPNVVLLGQMNELFPDSKDVLNFASWFAFAPNMMLVMLLFAWLWLCFVYMRPNFKKSWGC

fish 301 G-TVTEKEIAAYNVIKKEHESLCEMTFGLSVLALFILLVVLWFTRDPGFMDGHAIR-E
mouse 291 CGEKKRDTEPIAYKVLNEEYOKLCSLSYFECNVLFCTLLVILWFSRDPGFMPGWLSPAW
rat 291 CCRKKKDKTEKILSKVLYEEYRKLGPLSYAECNVLFCTGLLILWFSRDPGFMPGWLSTAW
human 288 GLESKK-NEKAALKVLOEYRKLGPLSPAEINVLICFFLLVILWFSRDPGFMPGWLTVAW

fish 359 FNADKEFVTDATVAIFVAALLFVFPSPKFERLCFWRTESFTVPQOESGPTFALLTWKVTG
mouse 351 VEGNTVHTIDATVAIFVAILLFIIPSQKPKFNFSQTEEBRH---TPFYPPALLDWKVAQ
rat 351 IEGNTKHVTDATVAIFVAILLFIVPSQKPKFNFSRQTEEBRH---TPFYPPPLLDWKVTC
human 347 VEGETHYVSDATVAIFVATLLFIVPSQKPKFNFSRQTEEBRH---TPFYPPPLLDWKVTC

fish 419 KMPMSITILLGGGFALAKGSEISGLSKNLGDSPLQSIPEWATAIVICLMIATFTECT
mouse 408 EKVPNDIVLLGGGFAMAKGCTSGLSKNWYAAQMEPLRLKPAVITLILSCLVAMTTECT
rat 408 EKVPWGIIVLLGGGFAMAKGCTSGLSKNWYAAQMEPLSSRPATITLILSCIVAMTTECT
human 404 EKVPWGIIVLLGGGFALAKGSEASGLSVWYKQMEPLHAVPPAATLILSLLVAVFTECT

fish 479 SNVATATLFLPILASMSOSIGVNPPLYVMVPCTLSASFAMLPVATPPNAIVFSYGLKVS
mouse 468 SNVATTTLFLPIFASWARSIGIHPLYVMIPCTMSASLAFMLPVATPPNAIVFAYGHLRVV
rat 468 SNVATTTLFLPIFASWARSIGIHPLYVMIPCTLSASLAFMLPVATPPNAIVFAYGHLKVI
human 464 SNVATTTLFLPIFASWRSIGINPLYVIMLPCTLSASFAMLPVATPPNAIVFTYGRHLKVA

fish 539 DMAKTGIVMNIIGILSITILAINSWGRAIFSLDTEPFSWANTEDV--
mouse 528 DMKKTGLIMNFVIGILSVFLSVNTWGRAMFNLENFPDWANSTSVNT
rat 528 DMVKTGLVMNIGIASVFLSVNTWGRAVENLDKFPDWANLTHINT
human 524 DMVKTCGIVMNIIGVFCVFLAVNTWGRAIFDLDHFPDWANVTHIBT
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Figure 38

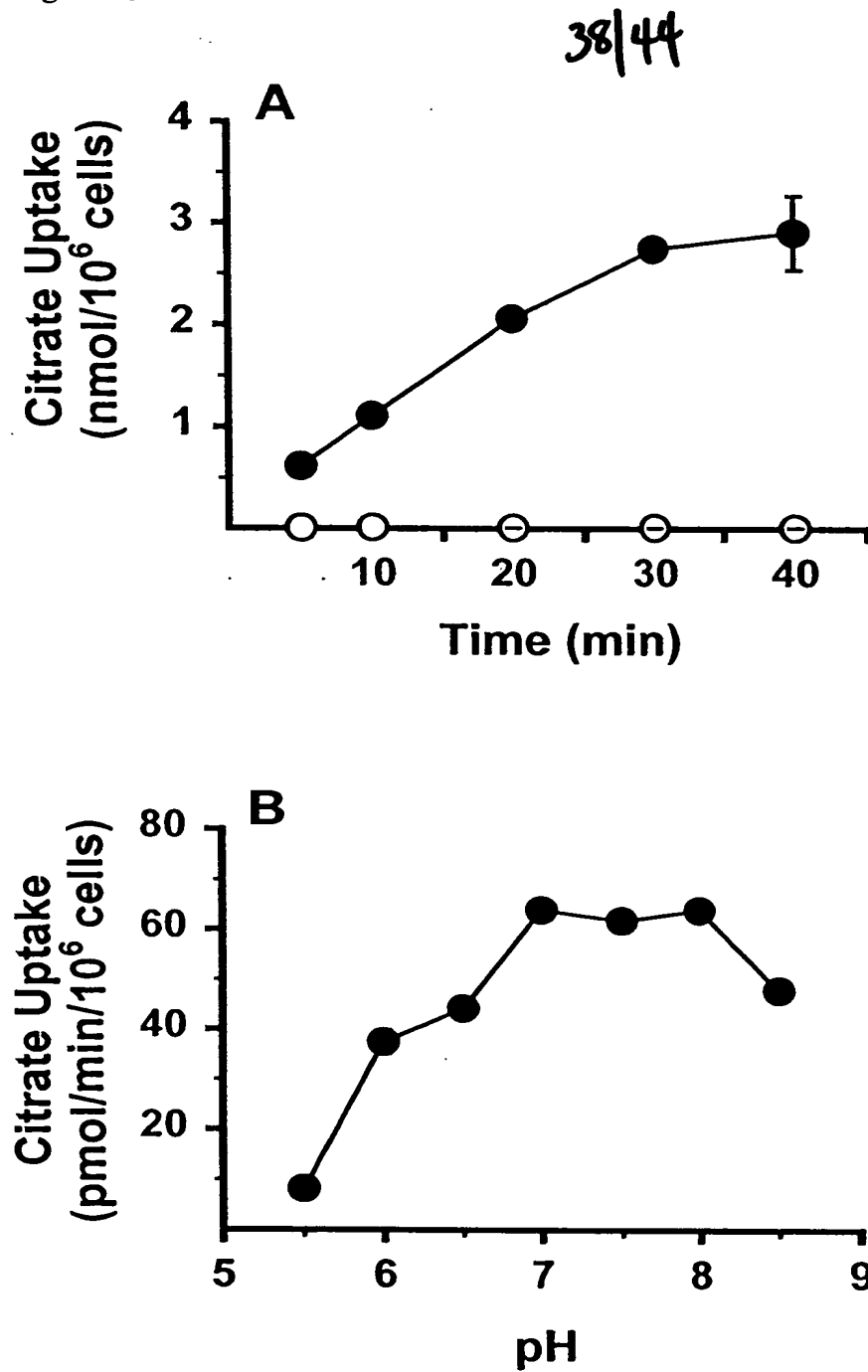
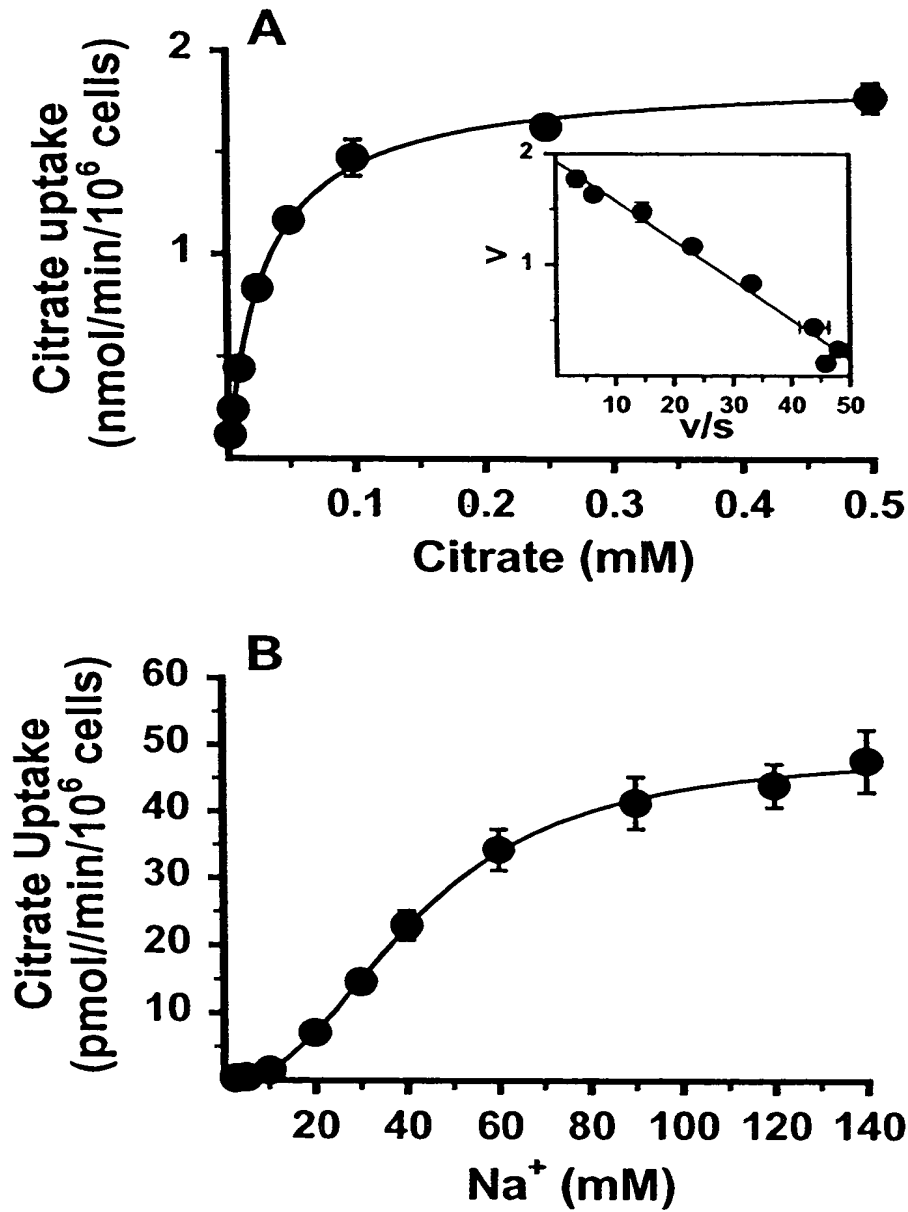


Figure 39

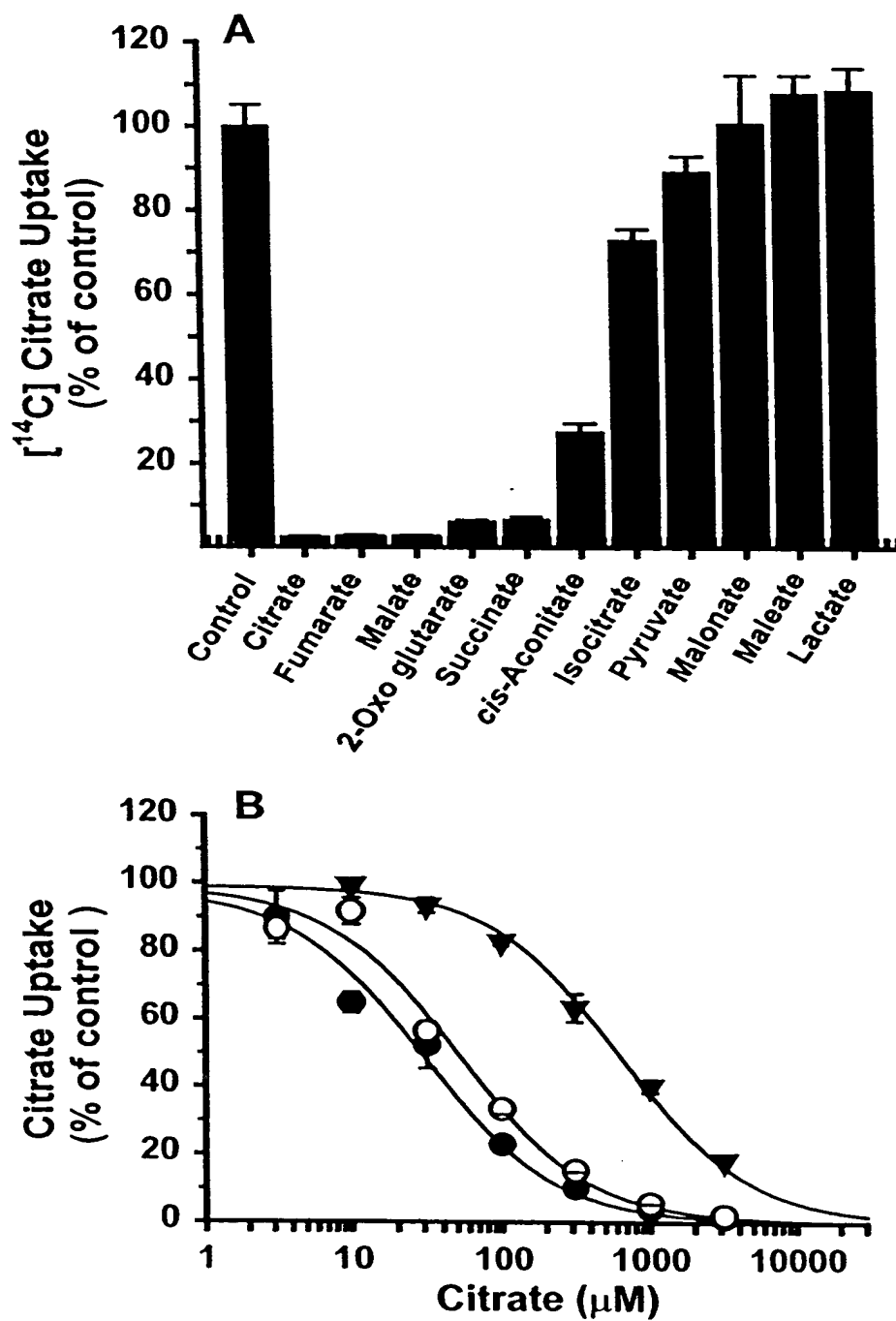
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Figure 40



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Figure 41

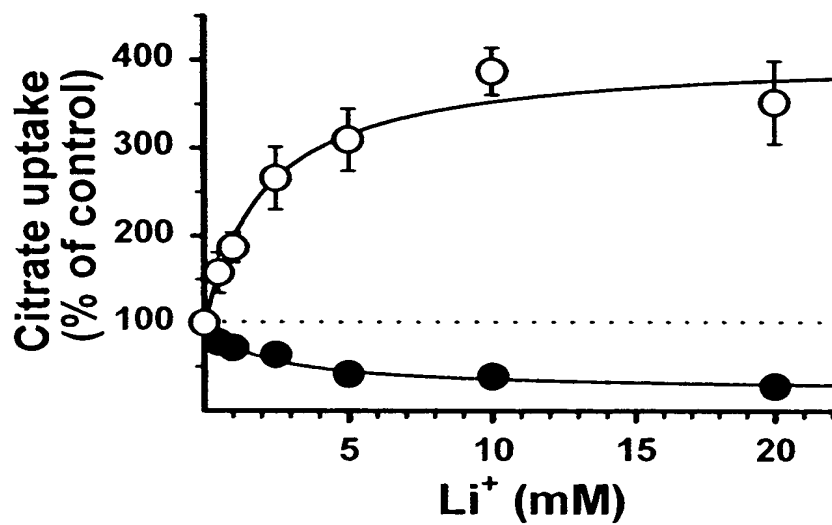
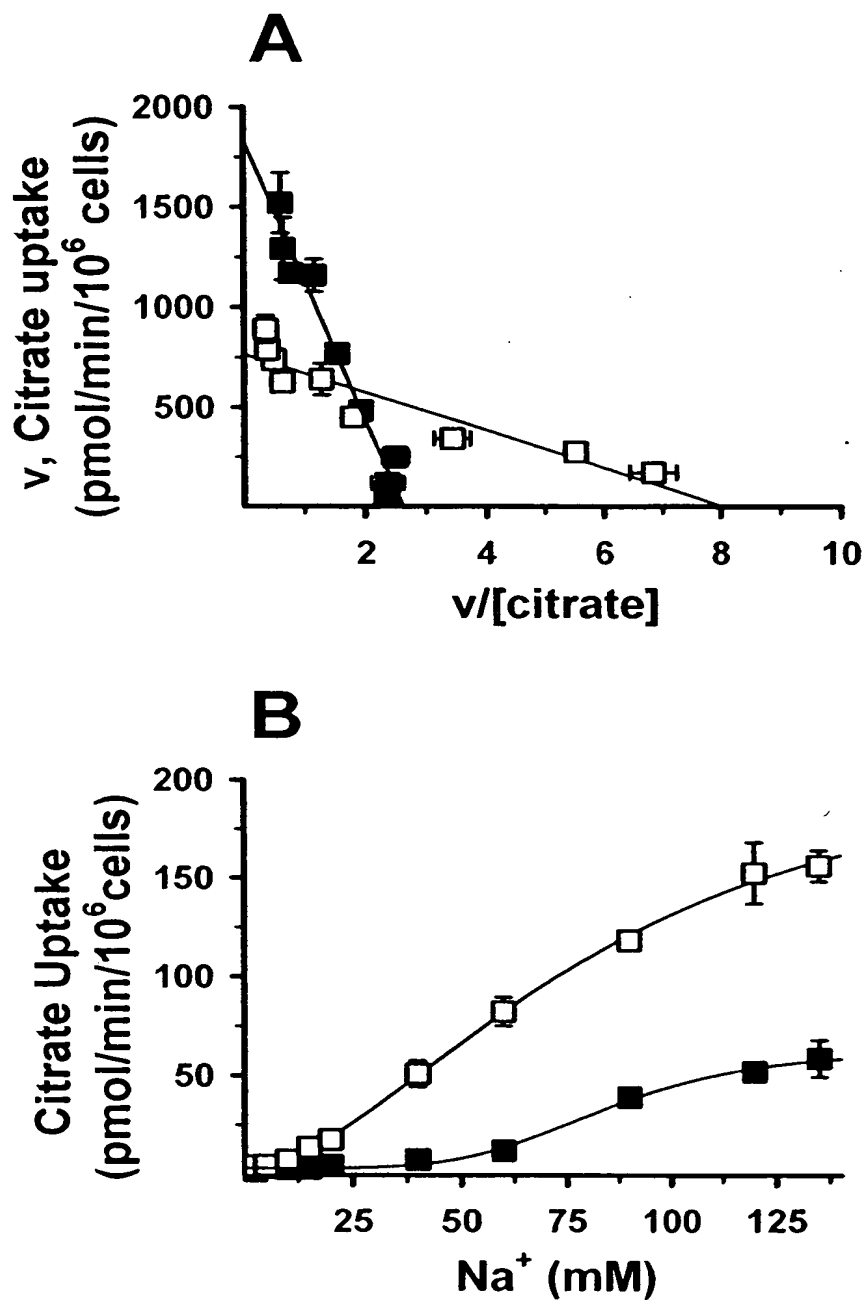


Figure 42

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Figure 43

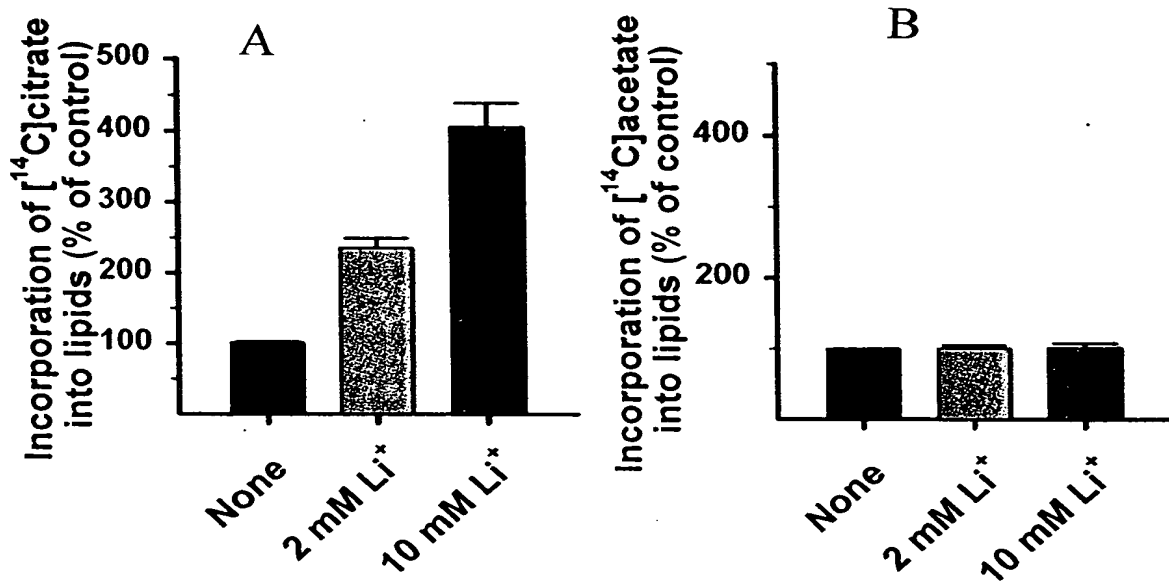


Figure 44

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